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# CERTIFICATE OF INCORPORATION ON RE-REGISTRATION OF PRIVATE COMPANY AS A PUBLIC COMPANY

Company No. 4313987

The Registrar of Companies for England and Wales hereby certifies that

ARK THERAPEUTICS GROUP PLC

formerly registered as a private company has this day been reregistered under the Companies Act 1985 as a public company and that the company is limited.

Given at Companies House, London, the 25th February 2004

LD1 D133 COMPANIES HOUSE 25/02/04

S. Evoo SIMON EVANS

For The Registrar Of Companies



# APPENDIX 2

Articles of association adopted by a special resolution passed on February 24, 2004

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The Companies Acts 1985 to 1989

# Articles of Association of ARK THERAPEUTICS GROUP PLC

Public Company Limited by Shares (Incorporated on 31 October 2001)

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# THE COMPANIES ACTS 1985 AND 19

## **PUBLIC COMPANY LIMITED BY SHARES**

# **ARTICLES OF ASSOCIATION**

- of -

# ARK THERAPEUTICS GROUP PLC

(adopted by a special resolution passed on 24 February 2004)

# **PRELIMINARY**

# **Exclusion of Table A**

The regulations contained in Table A in the schedule to The Companies (Tables A to F) Regulations 1985 and in any Table A applicable to the Company under any former enactment relating to companies shall not apply to the Company except in so far as they are repeated or contained in these Articles.

# 2. Definitions and interpretation

In these Articles, unless the context otherwise requires:

"Act" means the Companies Act 1985 (as amended by the Companies Act 1989);

"address" shall, in any case where electronic communication is expressly permitted by or pursuant to these Articles, include any number or address used for the purpose of such electronic communication but, in any other case, shall not include any number or address used for such purpose;

"Articles" means these articles of association as altered from time to time;

"Auditors" means the auditors for the time being of the Company;

"clear days' notice" means that the notice shall be exclusive of the day on which it is served or deemed to be served and of the day for which it is given or on which it is to take effect;

"communication" shall, where the context so admits, have the same meaning as in the Electronic Communications Act:

"Directors" means the directors for the time being of the Company, or, as the case may be, the board of directors for the time being of the Company or the persons present at a

duly convened meeting of the board of directors or any duly authorised committee thereof at which a quorum is present;

"dividend" includes bonus;

"electronic communication" shall, where the context so admits, have the same meaning as in the Electronic Communications Act;

"Electronic Communications Act" means the Electronic Communications Act 2000;

"London Stock Exchange" means London Stock Exchange plc;

"Member" means a member of the Company;

"month" means calendar month;

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"Office" means the registered office for the time being of the Company;

"paid up" includes credited as paid up;

"Register" means the register of members of the Company required to be kept by the Statutes:

"relevant system" means the computer-based system and procedures which enable title to shares to be evidenced and transferred without a written instrument and which facilitate supplementary and incidental matters in accordance with the Regulations;

"Regulations" means the Uncertificated Securities Regulations 2001;

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"Seal" means the common seal of the Company or any official or securities seal that the Company may have or be permitted to have under the Statutes; company they will be a superior

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"Secretary" includes a joint, deputy or assistant secretary, and any person appointed by the Directors to perform the duties of the secretary of the Company;

"Statutes" means the Act, the Companies Act 1989, the Regulations, the Electronic Communications Act and every other statute or subordinate legislation for the time being in force concerning companies and affecting the Company;

"UK Listing Authority" means the Financial Services Authority in its capacity as the competent authority for the purposes of Part VI of the Financial Services and Markets Act 2000;

"United Kingdom" means Great Britain and Northern Ireland; and

"in writing" and "written" includes printing, lithography, typewriting, photography and other modes of representing or reproducing words in visible form.

Words importing the singular number only shall include the plural, and vice versa.

Words importing the masculine gender only shall include the feminine gender.

Words importing individuals and words importing persons shall include bodies corporate and unincorporated associations.

Any reference herein to the provisions of any statute or of any subordinate legislation shall include any amendment or re-enactment (with or without amendment) thereof for the time being in force.

Subject as aforesaid, and unless the context otherwise requires, words and expressions defined in the Statutes shall bear the same meanings in these Articles.

A special or extraordinary resolution shall be effective for any purpose for which an ordinary resolution is expressed to be required under any provision of these Articles.

Headings to these Articles are for convenience only and shall not affect construction.

# SHARES

# 3. Authorised share capital

The capital of the Company as at the date of the adoption of these Articles as the Articles of Association of the Company is £2,000,000 divided into 200,000,000 ordinary shares of 1p each.

# 4. Rights attaching to shares

Without prejudice to any special rights previously conferred on the holders of any existing shares or class of shares, any share in the Company may be issued with such rights (including preferred, deferred or other special rights) or such restrictions, whether in regard to dividend, voting, return of capital or otherwise as the Company may from time to time by ordinary resolution determine (or, in the absence of any such determination, as the Directors may determine).

# 5. Redemption and purchase of shares

Subject to the provisions of the Statutes:

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- 5.1 any shares may be issued which are to be redeemed or are liable to be redeemed at the option of the Company or the shareholder on such terms and in such manner as may be provided by these Articles; and
- 5.2 the Company may purchase any of its own shares (including any redeemable shares).

# 6. Financial assistance

The Company shall not give any financial assistance for the acquisition of shares in the Company except and in so far as permitted by the Statutes.

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# 7. Allotment at a discount

The shares of the Company shall not be allotted at a discount and save as permitted by the Statutes shall not be allotted except as paid up at least as to one-quarter of their nominal value and the whole of any premium thereon.

# 8. Payment of commission and brokerage

The Company may exercise the powers of paying commissions conferred by the Statutes to the full extent thereby permitted. Such commission may be satisfied by the payment of cash or the allotment of fully or partly paid shares or partly in one way and partly in the other. The Company may also on any issue of shares pay such brokerage as may be lawful.

# 9. Unissued shares

9.1 Save as otherwise provided in the Statutes or in these Articles, all unissued shares (whether forming part of the original or any increased capital) shall be at the disposal of the Directors who may (subject to the provisions of the Statutes) allot (with or without

conferring a right of renunciation), grant options over, offer or otherwise deal with or dispose of them to such persons at such times and generally on such terms and conditions as they may determine. The Directors may at any time after the allotment of any share but before any person has been entered in the Register as the holder, recognise a renunciation thereof by the allottee in favour of some other person and may accord to any allottee of a share a right to effect such renunciation upon and subject to such terms and conditions as the Directors may think fit to impose.

# 9.2 Section 80 and 95 resolutions

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- (a) The Directors shall, by resolution of the Company which shall specify the Section 80 Period and the Section 80 Amount for the purpose of this article, be generally and unconditionally authorised pursuant to section 80 of the Act to exercise, during each Section 80 Period, all the powers of the Company to allot relevant securities (as defined in section 80(2) of the Act) up to an aggregate nominal amount equal to the Section 80 Amount;
- (b) Pursuant to and within the terms of the relevant section 80 authority which remains in force in accordance with sub-paragraph 9.2(a) above, the Directors shall, by resolution of the Company which shall specify the Section 89 Period and the Section 89 Amount for the purpose of this article, be empowered pursuant to section 95 of the Act, for each section 89 period, to allot equity securities (as defined in section 94 of the Act) wholly for cash during each such Section 89 Period as if section 89(1) of the Act did not apply to such allotment provided that such power shall be limited to:-
  - (i) the allotment of equity securities in connection with a rights issue; and
  - (ii) the allotment (otherwise than in connection with a rights issue) of equity securities up to an aggregate nominal amount equal to the Section 89 Amount;
- (c) During each section 80 Period and each Section 89 Period the Company may make an offerior agreement which would or might require relevant securities and equity securities as appropriate to be allotted after the expiry of such period and the board may allot such securities in pursuance of such an offer or agreement as if the power conferred had not expired.
- (d) For the purposes of this article:-

"rights issue" means an offer of equity securities, to ordinary shareholders and to all holders of any other class of equity security in proportion (as nearly as may be) to their respective holdings of such securities or in accordance with the rights attached to such equity securities but subject to such exclusions, variations or other arrangements as the Directors may deem necessary or expedient to deal with:-

- (i) fractional entitlements; and
- (ii) legal or practical problems under the laws of, or the requirements of, any regulatory body or any stock exchange in, any territory;

"Section 80 Amount" shall, for any Section 80 Period, be that amount stated in the relevant resolution;

"Section 80 Period" means any period (not exceeding five years from the date of the relevant resolution) for which the authority referred to in paragraph (a) is conferred by such resolution;

"Section 89 Amount" shall, for any Section 89 Period, be that amount stated in the relevant resolution:

**"Section 89 Period"** means any period (not expiring after the date of expiry of the Section 80 Period) for which the power referred to in paragraph (b) is conferred by such resolution;

the nominal amount of any securities shall be taken to be, in the case of rights to subscribe for or to convert any securities into shares of the Company, the nominal amount of such shares which may be allotted pursuant to such rights; and

Words and expressions defined in or for the purposes of Part IV of the Act shall bear the same meanings herein.

# 10. Recognition of trusts

Except as required by law or pursuant to the provisions of these Articles, no person shall be recognised by the Company as holding any share upon any trust, and (except only as by these Articles or by law otherwise provided or under an order of a court of competent jurisdiction) the Company shall not be bound by or be compelled in any way to recognise (even when having notice thereof) any equitable, contingent, future or partial interest in any share or any interest in any fractional part of a share or any other rights in respect of any share except an absolute right to the entirety thereof in the registered holder.

# SHARE CERTIFICATES

# 11. Uncertificated shares

Unless otherwise determined by the Directors and permitted by the Regulations, no person shall be entitled to receive a certificate in respect of any share for so long as the title to that share is evidenced otherwise than by a certificate and for so long as transfers of that share may be made otherwise than by a written instrument by virtue of the Regulations. Notwithstanding any provisions of these Articles, the Directors shall have power to implement any arrangements they may, in their absolute discretion, think fit in relation to the evidencing of title to and transfer of an uncertificated share (subject always to the Regulations and the facilities and requirements of the relevant system concerned). No provision of these Articles shall apply or have effect to the extent that it is in any respect inconsistent with the holding of shares in uncertificated form.

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- 11.2 Conversion of a certificated share into an uncertificated share, and vice versa, may be made in such manner as the Directors may, in their absolute discretion, think fit (subject always to the Regulations and the facilities and requirements of the relevant system concerned).
- 11.3 The Company shall enter on the Register how many shares are held by each member in uncertificated form and in certificated form and shall maintain the Register in each case as required by the Regulations and the relevant system concerned. Unless the Directors otherwise determine, holdings of the same holder or joint holders in certificated form and uncertificated form shall be treated as separate holdings.
- 11.4 A class of share shall not be treated as two classes by virtue only of that class comprising both certificated shares and uncertificated shares or as a result of any provision of these Articles or the Regulations which applies only in respect of certificated or uncertificated shares.
- 11.5 The provisions of Articles 12 to 15 inclusive shall not apply to uncertificated shares.

# 12. Share certificates and right to share certificates

- 12.1 Every share certificate shall specify the number and class and the distinguishing number (if any) of the shares to which it relates and the amount paid up thereon. No certificate shall be issued relating to shares of more than one class.
- 12.2 Subject to Article 11, every person (other than a recognised clearing house (within the meaning of the Financial Services and Markets Act 2000) or a nominee of a recognised clearing house or of a recognised investment exchange (within the meaning of the Financial Services and Markets Act 2000) in respect of whom the Company is not by law required to complete and have ready for delivery a certificate) upon becoming the holder of a certificated share and whose name is entered as a Member on the Register shall be entitled without payment to receive within two months after allotment or lodgement of transfer (or within such other period as the conditions of issue shall provide) one certificate for all the certificated shares registered in his name or, in the case of shares of more than one class being registered in his name, a separate certificate for each class of certificated share so registered, and where a Member (except such a clearing house or nominee) transfers part of the shares of any class registered in his name he shall be entitled without payment to one certificate for the balance of certificated shares of that class retained by him. If a Member shall require additional certificates he shall pay for each additional certificate such reasonable sum (if any) as the Directors may determine.

# 13. Share certificate of joint holders

In respect of certificated shares of one class held jointly by more than one person the Company shall not be bound to issue more than one certificate, and delivery of a certificate for such shares to one of the joint holders of such shares shall be sufficient delivery to all such holders.

# Replacement of share certificates

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If any certificate be defaced then upon delivery thereof to the Directors they may order the same to be cancelled and may issue a new certificate in lieu thereof; and if any december certificate be worn out, lost or destroyed, then upon proof thereof to the satisfaction of the Directors and on such indemnity with or without security as the Directors deem adequate being given, a new certificate in lieu thereof shall be given to the party entitled to such worn out, lost or destroyed certificate.

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# 15. Payment for share certificates

Every certificate issued under the last preceding Article shall be issued without payment, but there shall be paid to the Company such exceptional out-of-pocket expenses of the Company in connection with the request (including, without limiting the generality of the foregoing, the investigation of such request and the preparation and execution of any such indemnity or security) as the Directors think fit.

# **VARIATION OF RIGHTS**

# 16. Variation of class rights

If at any time the share capital is divided into different classes of shares, the rights attached to any class or any of such rights may, subject to the provisions of the Statutes, whether or not the Company is being wound up, be modified, abrogated or varied with the consent in writing of the holders of three-fourths in nominal value of the issued shares of that class, or with the sanction of an extraordinary resolution passed at a separate general meeting of the holders of the shares of that class.

# 17. Separate general meetings

To every such separate general meeting the provisions of sections 369, 370, 376 and 377 of the Act and the provisions of these Articles relating to general meetings shall, mutatis mutandis, so far as applicable apply, subject to the following provisions, namely:

- 17.1 the necessary quorum at any such meeting, other than an adjourned meeting, shall be two persons holding or representing by proxy at least one-third in nominal value of the issued shares of the class in question and at an adjourned meeting one person holding shares of the class in question or his proxy;
- any holder of shares of the class in question present in person or by proxy may demand a poll; and
- 17.3 every holder of shares of the class in question present in person or by proxy shall be entitled on a poll to one vote for every share of that class held by him.

# 18. Issues of further shares

The rights attached to any class of shares shall, unless otherwise expressly provided by the terms of issue of the shares of that class or by the terms upon which such shares are for the time being held, be deemed not to be modified, abrogated or varied by the creation or issue of further shares ranking pari passu therewith.

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# **CALLS ON SHARES**

# 19. Calls

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The Directors may, subject to the terms of allotment thereof, from time to time make such calls upon the Members as they think fit in respect of any monies unpaid on their shares (whether on account of the nominal value of the shares or by way of premium) and each Member shall (subject to the Company serving on him at least 14 days notice specifying the time or times and place of payment) pay to the Company at the time or times and place so specified the amount called on his shares. A call may be revoked or postponed, in whole or in part, as the Directors may determine. A person upon whom a call is made shall remain liable for all calls made upon him notwithstanding the subsequent transfer of the shares in respect of which the call was made.

# 20. Timing and payment of calls

A call shall be deemed to have been made at the time when the resolution of the Directors authorising the call was passed and may be required to be paid by instalments.

# 21. Liability of joint holders

The joint holders of a share shall be jointly and severally liable to pay all calls in respect thereof.

# 22. Interest due on non-payment of calls

If a sum payable in respect of any call or instalment is not paid on or before the day appointed for payment thereof, the person from whom it is due shall pay interest on the sum at such rate, not exceeding 15 per cent. per annum, as the Directors may determine from the day appointed for the payment thereof until the actual payment thereof, and all expenses that may have been incurred by the Company by reason of such non-payment; but the Directors may, if they shall think fit, waive the payment of such interest and expenses or any part thereof.

### 23. Deemed calls

Any sum which by the terms of issue of a share becomes payable on aliotment or at any fixed date, whether on account of the nominal value of the share or by way of premium, shall for the purposes of these Articles be deemed to be a call duly made and payable on the date on which by the terms of issue the same becomes payable, and in case of nonpayment all the relevant provisions of these Articles as to payment of interest and expenses, forfeiture or otherwise shall apply as if such sum had become payable by virtue of a call duly made and notified.

### 24. Power to differentiate between holders

The Directors may, on the issue of shares, differentiate between the holders of such shares as regards the amounts of calls to be paid and the times of payment of such calls.

### 25. Payment of calls in advance

The Directors may, if they think fit, receive from any Member willing to advance the same all or any part of the monies, whether on account of the nominal value of the shares or by way of premium, uncalled and unpaid upon any shares held by him; and upon all or any of the monies so paid in advance the Directors may (until the same would, but for such advance, become presently payable) pay interest at such rate not exceeding (unless the Company in general meeting shall otherwise direct) 12 per cent. per annum, as may be agreed upon between the Directors and the Member paying such monies in advance.

# FORFEITURE AND LIEN

# 26. Notice if call or instalment not paid

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If any Member fails to pay any call or instalment in full on or before the day appointed for the search of the sea payment thereof, the Directors may, at any time thereafter, serve a notice on him was and any requiring him to pay so much of the call or instalment as is unpaid, together with any interest which may have accrued and any expenses incurred by the Company by reason of weekly and such non-payment.

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### 27. Form of notice

The notice shall name a further day (not earlier than the expiration of 14 days from the date of service of the notice) on or before which, and the place where, such call or instalment and such interest and expenses as aforesaid are to be paid. The notice shall also state that in the event of non-payment at or before the time and at the place appointed, the shares in respect of which such call or instalment is payable will be liable to be forfeited.

### 28. Forfeiture for non-compliance

If the requirements of any such notice as aforesaid are not complied with, any share in respect of which such notice has been given may at any time after the day specified in such notice, before the payment required by the notice has been made, be forfeited by a resolution of the Directors to that effect. Such forfeiture shall extend to all dividends declared and other monies payable in respect of the shares so forfeited and not actually paid before such forfeiture. Forfeiture shall be deemed to occur at the time of the passing of the said resolution of the Directors. The Directors may accept a surrender of any share liable to be forfeited hereunder upon such terms and conditions as they think fit.

### 29. Notice after forfeiture

When any share has been forfeited notice of the forfeiture shall be served upon the person who was before forfeiture the holder of the share, or any person entitled to the share by transmission, and an entry of the forfeiture or surrender, with the date thereof, shall forthwith be made in the Register, but no forfeiture or surrender shall be invalidated by any failure to give such notice or make such entry as aforesaid.

# 30. Disposal of forfeited shares

A share so forfeited or surrendered shall be deemed to be the property of the Company, and may be sold, re-allotted or otherwise disposed of either to the person who was, before forfeiture, the holder or to any other person in such manner, either subject to or discharged from all calls made or instalments due prior to the forfeiture or surrender, as the Directors think fit: Provided that the Company shall not exercise any voting rights in respect of such share and any such share not disposed of in accordance with the foregoing within a period of three years from the date of its forfeiture or surrender shall thereupon be cancelled in accordance with the provisions of the Statutes. For the purpose of giving effect to any such sale or other disposition the Directors may authorise some person to transfer the share so sold or otherwise disposed of to, or in accordance with the directions of, the buyer thereof or other person becoming entitled thereto.

# 31. Annulment of forfeiture

The Directors may, at any time before any share so forfeited or surrendered shall have been cancelled or sold, re-allotted or otherwise disposed of, annul the forfeiture or surrender upon such terms as they think fit.

# 32. Continuing liability

Any person whose shares have been forfeited or surrendered shall cease to be a Member in respect of those shares and shall surrender to the Company for cancellation the certificate for the forfeited or surrendered shares, but shall, notwithstanding such forfeiture or surrender, remain liable to pay to the Company all monies which, at the date of the forfeiture or surrender, were payable by him to the Company in respect of the shares, together with interest thereon at such rate, not exceeding 15 per cent, per annum, as the Directors may determine from the time of forfeiture or surrender until the time of payment, but his liability shall cease if and when the Company shall have received payment in full of all such monies in respect of the shares, together with interest as aforesaid. The Directors may, if they shall think fit, waive the payment of such interest or any part thereof. The Company may enforce payment of such monies without being under any obligation to make any allowance for the value of the shares forfeited or surrendered or for any consideration received on their disposal.

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# 33. Lien on partly-paid shares

The Company shall have a first and paramount lien on every share (not being a fully-paid share) for all monies (whether presently payable or not) called or payable at a fixed time in respect of such share; but the Directors may at any time waive any lien which has arisen and may declare any share to be wholly or in part exempt from the provisions of this Article. The Company's lien, if any, on a share shall extend to all amounts payable in respect of it.

# 34. Enforcement of lien by sale

The Company may sell, in such manner as the Directors think fit, any share on which the Company has a lien, but no sale shall be made unless a sum in respect of which the lien exists is presently payable, nor until the expiration of 14 days after a notice in writing, (i) stating, and demanding payment of, the sum presently payable, and (ii) giving notice of intention to sell in default of such payment, has been given to the registered holder for the time being of the share, or the person entitled thereto by reason of his death or bankruptcy or otherwise by operation of law.

### 35. Application of sale proceeds

The net proceeds of such sale, after payment of the costs thereof, shall be applied in or towards satisfaction of such part of the amount in respect of which the lien exists as is presently payable. The residue, if any, shall (subject to a like lien for sums not presently payable as existed upon the shares before the sale) be paid to the person entitled to the shares at the date of sale. For giving effect to any such sale the Directors may authorise some person to transfer the shares sold to, or in accordance with the directions of, the buyer.

### 36. Statutory declaration

A statutory declaration in writing that the declarant is a Director or the Secretary of the Company, and that a share has been duly forfeited or surrendered or sold to satisfy a lien of the Company on a date stated in the declaration, shall be conclusive evidence of the facts stated therein against all persons claiming to be entitled to the share. Such declaration and the receipt of the Company for the consideration (if any) given for the share on the sale, re-allotment or disposal thereof, together with, in the case of certificated shares, the share certificate delivered to a buyer or allottee thereof, shall (subject to the execution of a transfer if the same be required) constitute a good title to the share and the person to whom the share is sold, re-allotted or disposed of shall be registered as the holder of the share and shall not be bound to see to the application of the purchase money (if any) nor shall his title to the share be affected by any irregularity or invalidity in the proceedings relating to the forfeiture, surrender, sale, re-allotment or disposal of the share.

# TRANSFER OF SHARES

# 37. Transfers of uncertificated shares

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- All transfers of certificated shares shall be effected by instrument in writing in any usual or 38.1 common form or any other form which the Directors may approve.
- 38.2 The instrument of transfer of any certificated share in the Company shall be signed by or on behalf of the transferor (and, in the case of a share which is not fully paid, shall also be signed by or on behalf of the transferee). In relation to the transfer of any share (whether a certificated or an uncertificated share) the transferor shall be deemed to remain the holder of the share until the name of the transferee is entered in the Register in respect thereof.

### 39. Right to decline registration

Subject to Article 75, the Directors may, in their absolute discretion and without assigning any reason therefor, refuse to register any transfer of any share which is not a fully-paid share (whether certificated or uncertificated) provided that, where any such shares are admitted to the Official List of the UK Listing Authority, such discretion may not be exercised in a way which the UK Listing Authority regards as preventing dealings in the shares of the relevant class or classes from taking place on an open or proper basis. The Directors may likewise refuse to register any transfer of a share (whether certificated or uncertificated), whether fully-paid or not, in favour of more than four persons jointly.

### 40. Further rights to decline registration

In relation to a certificated share, the Directors may decline to recognise any instrument of transfer unless:

- the instrument of transfer is left at the Office, or at such other place as the Directors may 40.1 from time to time determine, accompanied by the certificate(s) of the shares to which it relates and such other evidence as the Directors may reasonably require to show the right of the transferor to make the transfer (and, if the instrument of transfer is executed by some other person on his behalf, the authority of that person so to do); and
- 40.2 the instrument of transfer is in respect of only one class of share.

### 41. Notice of refusal to register

If the Directors refuse to register a transfer they shall, in the case of certificated shares, within two months after the date on which the transfer was lodged with the Company, send to the transferee notice of the refusal and (except in the case of fraud) return to him the instrument of transfer or, in the case of uncertificated shares, notify such person as may be required by the Regulations and the requirements of the relevant system concerned. All instruments of transfer which are registered may be retained by the Company.

### 42. No fee for registration

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No fee shall be charged by the Company on the registration of any instrument of transfer, probate, letters of administration, certificate of death or marriage, power of attorney, renunciation of a renounceable letter of allotment, stop notice or other document or instruction relating to or affecting the title to any shares or otherwise for making any entry in the Register affecting the title to any shares and the second of the second o 

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# 43. Suspension of registration 彩 流台 1355

The registration of transfers may be suspended at such times and for such periods as the Directors may from time to time determine, and either generally or in respect of any class of shares except that, in respect of any shares which are uncertificated shares, the Register shall not be closed without the consent of the operator of the relevant system, provided always that such registration shall not be suspended, either generally or otherwise, for more than 30 days in any year.

### 44. **Destruction of documents**

The Company shall be entitled to destroy:

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- 44.1 any instrument of transfer (which phrase, together with references to documents, shall for the purposes of this Article 44 include electronically generated or stored communications in relation to the transfer of uncertificated shares and any electronic or tangible copies of the same) or other document which has been registered, or on the basis of which registration was made, at any time after the expiration of six years from the date of registration thereof;
- 44.2 any dividend mandate or any variation or cancellation thereof or any notification of change of address (which shall include, in relation to electronic communications, any number or address used for the purposes of such communications), at any time after the expiration of two years from the date of recording thereof; and
- 44.3 any share certificate which has been cancelled, at any time after the expiration of one year from the date of such cancellation,

and it shall conclusively be presumed in favour of the Company that every entry in the Register purporting to have been made on the basis of an instrument of transfer or other document so destroyed was duly and properly made, that every instrument of transfer so destroyed was a valid and effective instrument duly and properly registered, that every share certificate so destroyed was a valid certificate duly and properly cancelled and that every other document destroyed hereunder was a valid and effective document in accordance with the recorded particulars thereof in the books or records of the Company, provided always that:

- (a) the provisions aforesaid shall apply only to the destruction of a document in good faith and without express notice to the Company that the preservation of such document was relevant to any claim (regardless of the parties thereto);
- (b) nothing contained in this Article shall be construed as imposing upon the Company any liability in respect of the destruction of any such document earlier than as aforesaid or in any case where the conditions of proviso (a) above are not fulfilled; and
- (c) references in this Article to instruments of transfer shall include, in relation to uncertificated shares, instructions and/or notifications made in accordance with the relevant system concerned relating to the transfer of such shares;
- (d) references in this Article to the destruction of any document include references to its disposal in any manner; and
- (e) in relation to uncertificated shares, the provisions of this Article shall apply only to the extent the same are consistent with the Regulations.

# TRANSMISSION OF SHARES

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# 45. Transmission on death a page of \$\display\$

In case of the death of a Member the survivor or survivors where the deceased was a joint holder, and the legal personal representatives of the deceased where he was a sole or only surviving holder, shall be the only persons recognised by the Company as having any title to his interest in the shares; but nothing herein contained shall release the estate of a deceased Member from any liability in respect of any share which had been solely or jointly held by him.

# 46. Person entitled by transmission

Any person becoming entitled to a share in consequence of the death or bankruptcy of a Member or otherwise by operation of law may, upon such evidence being produced as may from time to time properly be required by the Directors and subject as hereinafter provided, elect either to be registered himself as holder of the share or to have some person nominated by him registered as the transferee thereof, but the Directors shall, in either case, have the same right to decline or suspend registration as they would have had in the case of a transfer of the share by the Member registered as the holder of any such share before his death or bankruptcy or other event, as the case may be.

# 47. Restrictions on election

If the person so becoming entitled shall elect to be registered himself, he shall deliver or send to the Company a notice in writing signed by him stating that he so elects. If he shall elect to have another person registered he shall testify his election by executing to that person a transfer of the share. All the limitations, restrictions and provisions of these Articles relating to the right to transfer and the registration of transfers of shares shall be applicable to any such notice or transfer as aforesaid as if the death or bankruptcy of the

Member or other event had not occurred and the notice or transfer were a transfer signed by the Member registered as the holder of any such share.

### 48. Rights of persons entitled by transmission

A person becoming entitled to a share by reason of the death or bankruptcy of the holder or otherwise by operation of law shall, upon supplying to the Company such evidence as the Directors may reasonably require to show his title to the share, be entitled to the same dividends and other advantages to which he would be entitled if he were the registered holder of the share, except that he shall not, before being registered as a Member in respect of the share, be entitled in respect of it to exercise any right conferred by membership in relation to meetings of the Company (including meetings of the holders of any class of shares in the Company), provided always that the Directors may at any time give notice requiring any such person to elect either to be registered himself or to transfer the share, and, if the notice is not complied with within 60 days, the Directors may thereafter withhold payment of all dividends, bonuses or other monies payable in respect of the share until the requirements of the notice have been complied with.

# UNTRACED SHAREHOLDERS

### 49. Power to sell shares

The Company shall be entitled to sell, at the best price reasonably obtainable at the time of sale, any share of a Member or any share to which a person is entitled by transmission if and provided that:

- for a period of 12 years no cheque, warrant or order sent by the Company in the manner 49.1 authorised by these Articles in respect of the share in question has been cashed and no communication has been received by the Company from the Member or the person entitled by transmission; provided that, in such period of 12 years, at least three dividends whether interim or final on or in respect of the share in question have become payable and no such dividend during that period has been claimed; and "奶头"的爆出"连点点"起新 医凯瑟纳氏征 医二烷二烷医氯化
- 强强的工作员 克尼斯特 the Company has, on or after expiration of the said period of 12 years, by advertisement 49.2 in both a national newspaper and a newspaper circulating in the area in which the last known address of the member or the address at which service of notices may be effected in the manner authorised in accordance with the provisions of these Articles is located, given notice of its intention to sell such share (but so that such advertisements need not refer to the names of the holder(s) of the share or identify the share in question); and
  - the Company has not, during the further period of three months after the publication of 49.3 such advertisements and prior to the exercise of the power of sale, received any communication from the Member or person entitled by transmission; and
  - if the shares are admitted to the Official List of the UK Listing Authority or dealt in on the 49.4 London Stock Exchange, the Company has given notice to a Regulatory Information Service (as defined in the UK Listing Authority Listing Rules) of its intention to sell such shares.

### 50. Power to sell further shares

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If, during any 12 year period or three month period referred to in Articles 49.1 and 49.3 of the preceding Article, further shares have been issued in respect of those held at the beginning of such 12 year period or of any subsequently issued during such periods and all the other requirements of such Article have been satisfied in respect of the further shares, the Company may also sell such further shares.

### 51. Authority to effect sale

To give effect to any sale pursuant to the previous two Articles, the Directors may authorise any person to execute as transferor an instrument of transfer of the said share and such instrument of transfer shall be as effective as if it had been executed by the registered holder of, or person entitled by transmission to, such share. The transferee shall not be bound to see to the application of the purchase monies and the title of the transferee shall not be affected by any irregularity or invalidity in the proceedings relating thereto. The net proceeds of sale shall belong to the Company which shall be obliged to account to the former Member or other person previously entitled as aforesaid for an amount equal to such proceeds and shall enter the name of such former Member or other person in the books of the Company as a creditor for such amount. No trust shall be created in respect of the debt, no interest shall be payable in respect of the same and the Company shall not be required to account for any money earned on the net proceeds, which may be employed in the business of the Company or invested in such investments (other than shares of the Company or its holding company (if any)) as the Directors may from time to time think fit.

### 52. Authority to cease sending cheques

If either (i) on two consecutive occasions cheques, warrants or orders in payment of dividends or other monies payable in respect of any share have been sent through the post or otherwise in accordance with the provisions of these Articles but have been returned undelivered or left uncashed during the periods for which the same are valid or any transfer by bank or other funds transfer system has not been satisfied; or (ii) following one such occasion reasonable enquiries have failed to establish any new address ...of the registered holder; the Company need not thereafter despatch further cheques,... warrants or orders and need not thereafter transfer any sum (as the case may be) in 🚕 🕍 🕬 - payment of dividends or other monies payable in respect of the share in question until the 』 🤫 👙 😘 adMember or other person entitled thereto shall have communicated with the Company and well there is also than supplied in writing to the Office an address for the purpose. Like the other the Maria (a)

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### 53. Increase of share capital

The Company may from time to time by ordinary resolution increase its share capital by such sum, to be divided into shares of such amount, as the ordinary resolution shall prescribe. All new shares shall be subject to the provisions of these Articles with reference to allotment, payment of calls, forfeiture, lien, transfer and transmission and otherwise.

### 54. Consolidation, sub-division and cancellation

The Company may by ordinary resolution:

- 54.1 consolidate and divide all or any of its share capital into shares of a larger nominal value than its existing shares;
- 54.2 sub-divide all or any of its share capital into shares of smaller nominal value, provided that:
  - in the sub-division the proportion between the amount paid and the amount, if (a) any, unpaid on each reduced share shall be the same as it was in the case of the share from which the reduced share is derived; and
  - (b) the ordinary resolution whereby any share is sub-divided may determine that as between the resulting shares one or more of such shares may be given any

preference or advantage or be subject to any restriction as regards dividend, capital, voting or otherwise over the others or any other of such shares;

54.3 cancel any shares which, at the date of the passing of the ordinary resolution, have not been taken or agreed to be taken by any person, and diminish the amount of its share capital by the amount of the shares so cancelled.

### 55. Fractions of shares

Subject to any direction by the Company in general meeting, whenever as the result of any consolidation or division of shares Members of the Company are entitled to any issued shares of the Company in fractions, the Directors may deal with such fractions as they shall determine and in particular may sell the shares to which Members are so entitled in fractions to any person (including, subject to the provisions of the Statutes, the Company) and pay and distribute to and amongst the Members entitled to such shares in due proportions the net proceeds of the sales thereof save for individual entitlements (net of expenses) not exceeding £3 which may be retained for the benefit of the Company. For the purpose of giving effect to any such sale the Directors may, in respect of certificated shares, nominate some person to execute a transfer of the shares sold on behalf of the Members so entitled to, or, in respect of uncertificated shares nominate any person to transfer such shares in accordance with the facilities and requirements of the relevant system concerned or make such other arrangements as are compatible with the relevant system concerned or, in either case, in accordance with the directions of the buyer thereof and may cause the name of the transferee(s) to be entered in the Register as the holder(s) of the shares comprised in any such transfer, and such transferee(s) shall not be The second to see to the application of the purchase money nor shall such transferee(s) title to a 第三輪 シュー ふく おthe shares be affected by any irregularity or invalidity in the proceedings in reference to こ \*\* - Second the sale. For the purposes of this Article, any shares representing fractional entitlements a மை இத்திரு ஆட்ட ஆண்ட் year to which any Member would, but for this Article, become entitled@may be issued in a कृतिकृत । 🧸 कृति certificated form or uncertificated form. 一种 一切性 蜡花 引出 "像不安性"的 人名英格兰 the sign was to be the

### 56. Reduction of share capital - 5191

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# **GENERAL MEETINGS**

### 57. Annual general meeting

The Company shall in each year hold a general meeting as its annual general meeting in addition to any other meetings in that year, and not more than 15 months shall elapse between the date of one annual general meeting of the Company and that of the next. The annual general meeting shall be held at such time and place as the Directors shall appoint.

### 58. Extraordinary general meetings

All general meetings other than annual general meetings shall be called extraordinary general meetings.

### 59. Convening of extraordinary general meetings

The Directors may, whenever they think fit, convene an extraordinary general meeting, and extraordinary general meetings shall also be convened on such requisition, or, in default, may be convened by such requisitionists, as provided by the Statutes. If at any time there are not within the United Kingdom sufficient Directors capable of acting to form a quorum the Directors in the United Kingdom capable of acting may convene an

extraordinary general meeting in the same manner as nearly as possible as that in which meetings may be convened by the Directors.

# NOTICE OF GENERAL MEETINGS

# 60. Length and form of notice

An annual general meeting and a meeting called for the passing of a special resolution shall be called by not less than 21 clear days' notice, and a meeting of the Company other than an annual general meeting or a meeting for the passing of a special resolution shall be called by not less than 14 clear days' notice. The notice shall specify the place, the day and the time of meeting and, in the case of any special business, the general nature of that business. It shall be given, in the manner hereinafter mentioned or in such other manner, if any, as may be prescribed by the Statutes or by the Company in general meeting, to such persons as are, under these Articles, entitled to receive such notices from the Company and shall comply with the provisions of the Statutes as to informing Members of their right to appoint proxies. A notice calling an annual general meeting shall specify the meeting as such and a notice convening a meeting to pass an extraordinary resolution or a special resolution as the case may be shall specify the intention to propose the resolution as such.

# 61. Short notice

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A meeting of the Company shall, notwithstanding that it is called by shorter notice than that specified in the last preceding Article, be deemed to have been duly called if it is so agreed:

- in the case of a meeting called as the annual general meeting, by all the Members entitled to attend and vote thereat; and the second s
- in the case of any other meeting, by a majority in number of the Members having a right to attend and vote at the meeting, being a majority together holding not less than 95 per cent. In nominal value of the shares giving that right.

# 62. Omission or non-receipt of notice or proxy

The accidental omission to give notice of a meeting, or to issue an invitation to appoint a proxy with a notice where required by these Articles, to any person entitled to receive notice, or the non-receipt of notice of a meeting or of an invitation to appoint a proxy by any such person, shall not invalidate the proceedings at that meeting.

# 63. Postponement of general meetings

If the Directors, in their absolute discretion, consider that it is impractical or unreasonable for any reason to hold a general meeting on the date or at the time or place specified in the notice calling the general meeting, they may postpone the general meeting to another date, time and/or place. When a meeting is so postponed, notice of the date, time and place of the postponed meeting shall be placed in at least two national newspapers in the United Kingdom. Notice of the business to be transacted at such postponed meeting shall not be required.

# PROCEEDINGS AT GENERAL MEETINGS

# 64. Ordinary and special business

All business shall be deemed special that is transacted at an extraordinary general meeting, and also all that is transacted at an annual general meeting, with the exception of declaring a dividend, the receiving of the annual accounts and the reports of the

Directors and Auditors on those accounts, the appointment of Directors in place of those retiring, the reappointment of Directors appointed since the last annual general meeting, the appointment of the Auditors (when special notice of the resolution for such appointment is not required by the Statutes) and the fixing of the remuneration of the Auditors or the determination of the manner in which such remuneration is to be fixed.

# 65. Quorum and procedure if quorum not present

- No business shall be transacted at any general meeting unless a quorum is present at the time when the meeting proceeds to business; save as herein otherwise provided, two Members present in person or by proxy and entitled to vote shall be a quorum. The appointment of a chairman of the meeting in accordance with the provisions of these Articles shall not be treated as part of the business of the meeting.
- from the time appointed for the meeting a quorum is not present, the meeting, if convened by or upon the requisition of Members, shall be dissolved. In any other case it shall stand adjourned to such day (being not less than 14 days and not more than 28 days later), time and place as the chairman of the meeting shall appoint. If at such adjourned meeting a quorum is not present within five minutes from the time appointed therefor, the Member or Members present in person or by proxy and entitled to vote shall have power to decide upon all matters which could properly have been disposed of at the meeting from which the adjournment took place. The Company shall give not less than seven clear days' notice of any meeting adjourned for want of a quorum, and the notice shall state that the Member or Members present as aforesaid shall form a quorum and shall have the power aforesaid.

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- In the case of any general meeting, the Directors may, notwithstanding the specification in the notice convening the general meeting of the place at which the chairman of the meeting shall preside (the "Principal Place"), make arrangements for simultaneous attendance and participation at other places by Members and proxies and others entitled to attend the general meeting but excluded from the Principal Place under the provisions of this Article 66.
  - Such arrangements for simultaneous attendance at the general meeting may include arrangements regarding the level of attendance at the other places provided that they shall operate so that any Members and proxies excluded from attendance at the Principal Place are able to attend at one of the other places. For the purpose of all other provisions of these Articles any such general meeting shall be treated as being held and taking place at the Principal Place.
  - The Directors may, for the purpose of facilitating the organisation and administration of any general meeting to which such arrangements apply, from time to time make arrangements, whether involving the issue of tickets (on a basis intended to afford to all Members and proxies and others entitled to attend the meeting an equal opportunity of being admitted to the Principal Place) or the imposition of some random means of selection or otherwise as they shall in their absolute discretion consider to be appropriate, and may from time to time vary any such arrangements or make new arrangements in their place. The entitlement of any Member or proxy or other person entitled to attend a general meeting at the Principal Place shall be subject to such arrangements as may for the time being be in force whether stated in the notice of the general meeting to apply to that Meeting or notified to the Members concerned subsequent to the provision of the notice of the general meeting.
  - The Directors or the chairman of the meeting or any person authorised by the Directors may direct that Members, proxies or corporate representatives wishing to attend any general meeting or anyone else permitted by the chairman of the meeting to attend

should submit to such searches or other security arrangements or restrictions (including, without limitation, restrictions on items of personal property which may be taken into the meeting) as the Directors or the chairman of the meeting or such person authorised by the Directors shall consider appropriate in the circumstances. Such persons shall be entitled in their absolute discretion to refuse entry to, or to eject from, such general meeting any such person who fails to submit to such searches or otherwise to comply with such security arrangements or restrictions.

66.5 The Directors or the chairman of the meeting or any person authorised by the Directors may, at any meeting, take such action as is thought fit to secure the safety of the people attending the meeting and to promote the orderly conduct of the business of the meeting as laid down in the notice of the meeting and the chairman of the meeting's decision on matters of procedure or matters arising incidentally from the business of the meeting shall be final, as shall be his determination as to whether any matter is of such a nature.

# 67. Chairman of general meetings and casting vote

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- The chairman, if any, of the board of Directors shall preside as chairman of every general meeting of the Company. If there is no such chairman, or if at any general meeting he shall not be present within five minutes after the time appointed for holding the meeting or is unwilling to act as chairman, the Directors present shall select one of their number to be chairman of the meeting; or if no Director is present and willing to take the chair the Members present and entitled to vote shall choose one of their number to be chairman of the meeting.
- In the case of an equality of votes, whether on a show of hands or on a poll, the chairman of the meeting at which the show of hands takes place or at which the poll is demanded, shall be entitled to a second or casting vote.

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# 68. Adjournments in a digregation

- The chairman of the meeting may, at any time without the consent of the meeting adjourn any meeting (whether or not it has commenced or has already been adjourned or a quorum is present) either sine die or to another time or place where it appears to him that (a) the Members wishing to attend cannot be conveniently accommodated in the place appointed for the meeting, (b) the conduct of any persons prevents or is likely to prevent the orderly continuation of business or (c) an adjournment is otherwise necessary so that the business of the meeting may be properly conducted.
- The chairman of the meeting may, with the consent of any meeting at which a quorum is present (and shall if so directed by the meeting), adjourn the meeting from time to time and from place to place; but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place. When a meeting is adjourned for 30 days or more, not less than seven clear days' notice of the adjourned meeting shall be given specifying the day, the place and the time of the meeting as in the case of an original meeting, and the provisions of Article 151 apply to notices of any such adjourned meeting as they apply to notices of meetings, but it shall not be necessary to specify in such notice the nature of the business to be transacted at the adjourned meeting. Save as aforesaid it shall not be necessary to give any notice of an adjournment.

# 69. Directors' right to attend and speak

Each Director shall be entitled to attend and speak at any general meeting of the Company and at any separate general meeting of the holders of any class of shares in the Company. The chairman of the meeting may invite any person to attend and speak at any general meeting of the Company whom the chairman of the meeting considers to be equipped by knowledge or experience of the Company's business to assist in the deliberations of the meeting.

# 70. Amendments to resolutions

If an amendment shall be proposed to any resolution under consideration but shall in good faith be ruled out of order by the chairman of the meeting the proceedings on the substantive resolution shall not be invalidated by any error in such ruling. In the case of a resolution duly proposed as a special or extraordinary resolution no amendment thereto (other than an amendment to correct a patent error) may in any event be considered or voted upon.

# 71. Method of voting and demand for a poll

At any general meeting a resolution put to the vote of the meeting shall be decided on a show of hands unless a poll is (before or on the declaration of the result of the show of hands) demanded:

71.1 by the chairman of the meeting; or

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- 71.2 by at least five Members present in person or by proxy and entitled to vote at the meeting; or
- 71.3 by any Member or Members present in person or by proxy and representing not less than one-tenth of the total voting rights of all the Members having the right to vote at the meeting; or
- by a Member or Members present in person or by proxy holding shares in the Company conferring a right to vote at the meeting being shares on which an aggregate sum has been paid up equal to not less than one-tenth of the total sum paid up on all shares conferring that right.

Unless a pollois so demanded a declaration by the chairman of the meeting that a resolution has on a show of hands been carried unanimously, or by a particular majority, or lost and amentry to that effect in the book containing the minutes of the proceedings of the Company shall be conclusive evidence of the fact without proof of the number or proportion of the votes recorded in favour of or against such resolution.

Except as provided in Article 72, if a poll is duly demanded it shall be taken in such manner (including the use of ballot or voting papers or tickets) as the chairman of the meeting directs and he may appoint scrutineers and fix a time and place for declaring the result of the poll. The result of the poll shall be deemed to be the resolution of the meeting at which the poll was demanded.

# 72. Timing and procedure for a poll

A poll demanded on the election of a chairman of the meeting or on the question of an adjournment shall be taken forthwith. A poll demanded on any other question shall be taken either immediately or at such subsequent time (not being more than 30 clear days after the date of the meeting or adjourned meeting at which the poll is demanded) and place as the chairman of the meeting may direct. No notice need be given of a poll not taken immediately. Any business other than that upon which a poll has been demanded may be proceeded with pending the taking of the poll. The demand for a poll may be withdrawn with the consent of the chairman of the meeting at any time before the close of the meeting or the taking of the poll, whichever is the earlier, and in that event shall not invalidate the result of a show of hands declared before the demand was made.

# **VOTES OF MEMBERS**

# 73. Votes of Members and of joint holders

- 73.1 Subject to any rights or restrictions for the time being attached to any class or classes of shares and to any other provisions of these Articles, on a show of hands every Member present in person shall have one vote, and on a poll every Member present in person or by proxy shall have one vote for each share of which he is the holder.
- 73.2 In the case of joint holders of a share, the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint holders; and for this purpose seniority shall be determined by the order in which the names stand in the Register in respect of the share.

# 74. Voting on behalf of incapable Member

A Member in respect of whom an order has been made by any court having jurisdiction (in the United Kingdom or elsewhere) in matters concerning mental disorder may vote, whether on a show of hands or on a poll, by his receiver, curator bonis or other person authorised on his behalf by that court, and such receiver, curator bonis or other person may, on a poll, vote by proxy, provided that evidence to the satisfaction of the Directors of the authority of the person claiming to exercise the right to vote has been delivered at the Office (or at such other place as may be specified in accordance with these Articles for the delivery of appointments of proxy) not later than the last time at which an appointment of a proxy should have been delivered in order to be valid for use at that meeting or on the holding of that poll.

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# 75: Suspension of rights for non-payment of calls and non-disclosure of interests

- 75.1 No Member shall, unless the Directors otherwise determine, be entitled, in respect of any share in the capital of the Company held by him to be present or to vote on any question, at any general meeting, or separate general meeting of the Company, or to be reckoned in a quorum, if any call for other sum presently payable by him to the Company in respect of such share remains unpaid.
- 75.2 If any Member, or any other person appearing to the Directors to be interested in any shares in the capital of the Company held by such Member, has been duly served with a notice under section 212 of the Act and is in default for the period of 14 days from the date of service of the notice under the said section 212 in supplying to the Company the information thereby required, then the Company may (at the absolute discretion of the Directors) at any time thereafter by notice (a "restriction notice") to such Member direct that, in respect of the shares in relation to which the default occurred and any other shares held at the date of the restriction notice by the Member, or such of them as the Directors may determine from time to time, (the "restricted shares" which expression shall include any further shares which are issued in respect of any restricted shares), the Member shall not, nor shall any transferee to which any of such shares are transferred other than pursuant to a permitted transfer or pursuant to Article 75.3(c) below, be entitled to be present or to vote on any question, either in person or by proxy, at any general meeting of the Company or separate general meeting of the holders of any class of shares of the Company, or to be reckoned in a quorum.
- 75.3 Where the restricted shares represent at least 0.25 per cent. (in nominal value) of the issued shares of the same class as the restricted shares, then the restriction notice may also direct that:
  - (a) any dividend or any part thereof or other monies which would otherwise be payable on or in respect of the restricted shares shall be withheld by the Company; shall not bear interest against the Company; and shall be payable

(when the restriction notice ceases to have effect) to the person who would but for the restriction notice have been entitled to them; and/or

- (b) where an offer of the right to elect to receive shares of the Company instead of cash in respect of any dividend or part thereof is or has been made by the Company, any election made thereunder by such Member in respect of such restricted shares shall not be effective; and/or
- (c) no transfer of any of the shares held by such Member shall be recognised or registered by the Directors unless the transfer is a permitted transfer or:
  - the Member is not himself in default as regards supplying the information required; and
  - (ii) the transfer is of part only of the Member's holding and, when presented for registration, is accompanied by a certificate by the Member in a form satisfactory to the Directors to the effect that after due and careful enquiry the Member is satisfied that none of the shares the subject of the transfer are restricted shares.

Upon the giving of a restriction notice its terms shall apply accordingly.

- 75.4 The Company shall send a copy of the restriction notice to each other person appearing to be interested in the shares the subject of such notice, but the failure or omission by the Company to do so shall not invalidate such notice.
- Any restriction notice shall have effect in accordance with its terms until not more than 7 days after the Directors are satisfied that the default in respect of which the restriction notice was issued no longer continues but shall cease to have effect in relation to any shares which are transferred by such Member by means of a permitted transfer or in accordance with Article 75.3(c) above on receipt by the Company of notice that a transfer as aforesaid has been made. The Company may (at the absolute discretion of the Directors) at any time give notice to the Member cancelling, or suspending for a stated period the operation of, a restriction notice in whole or in part.
  - 75.6 For the purposes of this Article 75:
    - (a) a person shall be treated as appearing to be interested in any shares if the Member holding such shares has given to the Company a notification whether following service of a notice under the said section 212 or otherwise which either (1) names such person as being so interested or (2) (after taking into account the said notification and any other relevant information in the possession of the Company) the Company knows or has reasonable cause to believe that the person in question is or may be interested in the shares; and
    - (b) a transfer of shares is a permitted transfer if but only if:
      - (i) it is a transfer by way of, or in pursuance of, acceptance of a takeover offer for the Company (as defined in section 428 of the Act); or
      - (ii) the Directors are satisfied that the transfer is made pursuant to a bona fide sale of the whole of the beneficial ownership of the shares to a third party unconnected with the transferring Member or with any other person appearing to the Directors to be interested in such shares (and for the purposes of this Article 75.6(b)(ii) any associate (as that term is defined in section 435 of the Insolvency Act 1986) of the Member or of any other person appearing to the Directors to be interested in any of the restricted shares shall be deemed to be connected with the transferring Member); or

- (iii) the transfer results from a sale made on or through the London Stock Exchange or any stock exchange outside the United Kingdom on which the Company's shares of the same class as the restricted shares are normally dealt in.
- 75.7 The provisions of this Article 75 are in addition and without prejudice to the provisions of the Statutes.

### 76. Objections to and errors in voting

No objection shall be raised to the qualification of any voter or to the counting of, or failure to count, a vote except at the meeting or adjourned meeting at which the vote objected to is given or tendered (or at which the error occurs), and every vote not disallowed at such meeting shall be valid for all purposes. Any such objection made in due time shall be referred to the chairman of the meeting, whose decision shall be final and conclusive.

### 77. Voting on a poll

On a poll votes may be given personally or by proxy and a Member entitled to more than one vote need not, if he votes, use all his votes or cast all the votes he uses in the same way.

### 78. **Execution of proxies**

The appointment of a proxy shall be in any usual or common form, or in any other form which the Directors may approve and shall be: 1994 1994

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- 78.2 if the appointor is a corporation, either under seal, or under the hand of an officer or attorney duly authorised; or 11.98 Fars Oak
  - 78.3 if permitted by the Directors, by electronic communication in the manner and form and subject to such terms and conditions as the Directors may decide.

The signature, if any, on such appointment need not be witnessed.

### 79. **Appointment of proxies**

A proxy need not be a Member of the Company. A Member may appoint more than one proxy to attend on the same occasion. Appointment of a proxy shall not preclude a Member from attending and voting in person at the meeting or any adjournment thereof.

### 80. **Delivery of proxies**

- 80.1 The appointment of a proxy shall:
  - (a) (in the case of an appointment not contained in an electronic communication) be deposited at the Office or at such other place or one of such places (if any) within the United Kingdom as is or are specified for that purpose by way of note to the notice convening the meeting or in any document accompanying such notice; or
  - (in the case of an appointment contained in an electronic communication) where an address or other means of communication with the Company has been provided for the purpose of receiving electronic communications in or by way of note to the notice convening the meeting or in any other document accompanying such notice, or in any invitation contained in an electronic communication to appoint a proxy

issued by the Company in relation to the meeting, be received at such address or by such means,

not less than 48 hours before the time for holding the meeting or adjourned meeting at which the person named in the appointment proposes to vote or, in the case of a poll taken otherwise than at or on the same day as the meeting or adjourned meeting, not less than 24 hours before the time appointed for the taking of the poll at which it is to be used, and in default the appointment of a proxy shall not be treated as valid. Failing previous registration with the Company, the power of attorney or other authority, if any, under which the appointment of a proxy is executed, or a notarially certified copy or a copy certified in accordance with the Powers of Attorney Act 1971 of that power of attorney, or a copy in some other way approved by the Directors, shall (whether (a) or (b) above shall apply) also be deposited or received at the Office or at such other place specified in accordance with (a) above or (if the Directors so agree) at the address or by the means provided in accordance with (b) above or as otherwise approved by the Directors, not later than the time by which the appointment of a proxy is required to be deposited or (as the case may be) received in accordance with this Article.

Without limiting the foregoing, in relation to any shares which are held in uncertificated form, the Directors may from time to time permit appointments of a proxy to be made by means of an electronic communication in the form of an Uncertificated Proxy Instruction (that is, a properly authenticated dematerialised instruction, and/or other instruction or notification, which is sent by means of the relevant system concerned and received by such participant in that system acting on behalf of the Company as the Directors may prescribe, in such form and subject to such terms and conditions as may from time to time be prescribed by the Directors (subject always to the facilities and requirements of the subject always to the facilities and requirements of the subject always to the facilities and requirements of the subject always to the facilities and requirements of the subject always to the facilities and requirements of the subject always to the facilities and requirements of the subject always to the facilities and requirements of the subject always to the facilities and requirements of the subject always to the facilities and requirements of the subject always to the facilities and requirements of the subject always to the facilities and requirements of the subject always to the relevant system concerned)); and may in a similar manner permit supplements to, or the second the second amendments or revocations of any such Uncertificated Proxy Instruction to be made by the second 10 10 10 10 like means. Notwithstanding any other provision of these Articles, the Directors may in the care addition prescribe the method of determining the time at which any such properly a state authenticated dematerialised instruction (and/or other instruction or notification) is to be treated as received by the Company or such participant. The Directors may treat any such Uncertificated Proxy Instruction which purports to be or is expressed to be sent on as 1940. behalf as a holder of a share as sufficient evidence of the authority of the person sending that instruction to send it on behalf of that holder.

- An appointment of a proxy and any other document referred to in the last sentence of 80.2 Article 80.1 shall be deemed to have been validly deposited or received in accordance with Article 80.1 if the appointment is received at the Office or at such other place specified in accordance with Article 80.1(a) by facsimile transmission within the period of time specified by Article 80.1 provided that the original appointment in the same form as the appointment received by facsimile transmission is deposited at the place at which the facsimile transmission was received not less than 24 hours before the time appointed for the meeting or adjourned meeting or the holding of a poll subsequently at which the vote is to be used.
- If two or more valid but differing appointments of a proxy are delivered or (in the case of 80.3 electronic communication) received in accordance with Article 80.1 in respect of the same share for use at the same meeting, the one which is last delivered or, as the case may be, received as aforesaid (regardless of its date, its date of sending or the date of its execution) shall be treated as replacing and revoking the others as regards that share. If the Company is unable to determine which was delivered or received last, none of them shall be treated as valid in respect of that share.

### Validity of proxies 81.

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An appointment of a proxy shall, unless the contrary is stated thereon, be valid as well for any adjournment of the meeting to which it relates. No appointment of a proxy shall be valid after the expiration of 12 months from the date of its receipt in accordance with Article 80.1 except at an adjourned meeting or on a poll demanded at a meeting or adjourned meeting in cases where the meeting was originally held within 12 months from that date.

# 82. Authority of proxies to call for a poll

The appointment of a proxy shall be deemed to confer authority on the proxy to demand or join in demanding a poll.

# 83. Cancellation of proxy's authority

A vote given or poll demanded in accordance with the terms of an appointment of a proxy or by the duly authorised representative of a corporation shall be valid notwithstanding the previous death or insanity of the principal or revocation of the proxy or determination of the authority of the person voting or demanding a poll, provided that no intimation in writing of such death, insanity, revocation or determination shall have been received by the Company at the Office or such other place (if any) as is specified for depositing the appointment of proxy or, where the appointment of the proxy was contained in an electronic communication, at the address at which such appointment was duly received or by the means of communication by which such appointment was received, in each case in accordance with Article 80.1, before the commencement of the meeting or adjourned meeting or the holding of a poll subsequently thereto at which such vote is given.

# 84. Written resolutions

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Subject to the provisions of the Statutes, a resolution in writing signed by all the Members for the time being entitled to receive notice of and to attend and vote at general meetings (or being corporations by their duly authorised representatives) shall be as valid and effective as if the same had been passed at a general meeting of the Company duly convened and held and may consist of two or more documents in like form each signed by one or more of such Members 1994 to 1994.

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# 85. Corporate representatives: His apparation of the state of the stat

Any corporation which is a Member of the Company may by resolution of its directors or other governing body authorise such person as it thinks fit to act as its representative at any meeting of the Company or of any class of Members of the Company, and the person so authorised shall be entitled to exercise the same powers on behalf of the corporation which he represents as that corporation could exercise if it were an individual Member of the Company and such corporation shall for the purposes of these Articles be deemed to be present in person at any such meeting if a person so authorised is present thereat.

# **DIRECTORS**

# 86. Number of Directors

Unless and until the Company in general meeting shall otherwise determine, the number of Directors shall be not more than 12 nor less than 4. The Company may by ordinary resolution from time to time vary the minimum number and/or maximum number of Directors.

# 87. Directors' shareholding qualification

A Director shall not be required to hold any shares in the capital of the Company. A Director who is not a Member shall nevertheless be entitled to receive notice of and attend and speak at all general meetings of the Company and all separate general meetings of the holders of any class of shares in the capital of the Company.

# 88. Age of Directors

The provisions of section 293 of the Act (which regulate the appointment and continuation in office of Directors who have attained the age of 70) shall apply to the Company

# 89. Other interests of Directors

A Director of the Company may be or continue as or become a director or other officer, servant or member of, or otherwise interested in, any body corporate promoted by the Company or in which the Company may be interested as shareholder or otherwise, and no such Director shall be accountable to the Company for any remuneration or other benefits received or receivable by him as a director or other officer servant or member of, or from his interest in, such other body corporate.

# 90. Directors' fees and expenses

- 90.1 The Directors shall be paid out of the funds of the Company by way of fees for their services as Directors such sums (if any) as the Directors may from time to time determine (not exceeding in the aggregate an annual sum (excluding amounts payable under any other provision of these Articles) of £300,000 or such larger amount as the Company may by ordinary resolution determine) and such remuneration shall be divided between the Directors as they shall agree or, failing agreement, equally. Such remuneration shall be deemed to accrue from day to day.
- The Directors may also be paid all reasonable travelling, hotel and other expenses properly incurred by them in attending and returning from meetings of the Directors or any committee of the Directors or general meetings of the Company or otherwise in connection with the business of the Company.

# 無機能 4 年 利 91. # Additional remuneration

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Any Director who is appointed to any executive office-or who serves on any committee or who devotes special attention to the business of the Company, or who otherwise performs services which in the opinion of the Directors are outside the scope of the ordinary duties of a Director, may be paid such extra remuneration by way of salary, percentage of profits or otherwise as the Directors may determine.

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# 92. Register of Directors' interests

The Company shall in accordance with the provisions of the Statutes duly keep a register showing, as respects each Director, interests of his in shares in, or debentures of, the Company or associated companies.

# **ALTERNATE DIRECTORS**

# 93. Alternate Directors

93.1 Each Director shall have the power at any time to appoint as an alternate Director either (1) another Director or (2) any other person approved for that purpose by a resolution of the Directors, and, at any time, to terminate such appointment. Every appointment and removal of an alternate Director shall be in writing signed by the appointor and (subject to approval of no less than three quarters of all the Directors) shall (unless the Directors agree otherwise) only take effect upon receipt of such written appointment or removal at the Office or at a meeting of the Directors or at some other address specified for the purpose of electronic communications. An alternate Director shall not be required to hold any shares in the capital of the Company and shall not be counted in reckoning the maximum and minimum numbers of Directors allowed or required by Article 86. In this Article 93.1 references to "in writing" and "written" shall include the use of electronic

communications delivered to an address which has been specified by the Directors for the purpose of notifying appointments and removals of alternate Directors by means of electronic communications and subject to such terms and conditions, if any, as the Directors may decide.

- 93.2 An alternate Director so appointed shall not be entitled as such to receive any remuneration from the Company except only such part (if any) of the remuneration otherwise payable to his appointor as such appointor may by notice in writing to the Company from time to time direct, but shall otherwise be subject to the provisions of these Articles with respect to Directors. An alternate Director shall during his appointment be an officer of the Company and shall alone be responsible to the Company for his own acts and defaults and shall not be deemed to be an agent of his appointor.
- 93.3 An alternate Director shall be entitled (subject to his giving to the Company either an address within the United Kingdom or an address (which shall include any number or address) for the purpose of electronic communications at which notices may be served upon him) to receive notices of all meetings of the Directors and of any committee of the Directors of which his appointor is a member, and shall be entitled to attend and vote as a Director at any such meeting at which his appointor is not personally present and generally in the absence of his appointor to perform and exercise all functions, rights, powers and duties as Director of his appointor.
- 93.4 The appointment of an alternate Director shall automatically determine on the happening of any event which, if he were a Director, would cause him to vacate such office or if his appointor shall cease for any reason to be a Director otherwise than by retiring and being re-appointed at the same meeting.
- A Director or any other person may act as alternate Director to represent more than one Director and an alternate Director shall be entitled at meetings of the Directors or any committee of the Directors to one vote for every Director whom he represents in addition to his own vote (if any) as a Director, but he shall count as only one for the purpose of determining whether a quorum is present.

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# BORROWING POWERS

# 94. Directors' borrowing powers and restrictions on borrowing

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- 94.1 Subject as hereinafter provided the Directors may exercise all the powers of the Company to borrow money, and to mortgage or charge its undertaking, property and assets (present and future) and uncalled capital, or any part thereof, and, subject to the provisions of the Statutes to issue debentures, debenture stock, and other securities whether outright or as security for any debt, liability or obligation of the Company or of any third party.
- 94.2 The Directors shall restrict the borrowings of the Company and exercise all voting and other rights or powers of control exercisable by the Company in relation to its subsidiary undertakings (if any) so as to secure (so far, as regards subsidiary undertakings, as by such exercise they can secure) that the aggregate amount for the time being remaining outstanding of all monies borrowed by the Group (which expression in this Article means the Company and its subsidiary undertakings for the time being) and for the time being owing to persons outside the Group shall not at any time, without the previous sanction of an ordinary resolution of the Company in general meeting, exceed a sum equal to £10 million.
- 94.3 For the purpose of the foregoing limit "monies borrowed" shall be deemed to include the following except in so far as otherwise taken into account (together in each case with any fixed or minimum premium payable on final redemption or repayment):

- the principal amount for the time being owing (other than to a member of the (a) Group) in respect of any loan capital, whether secured or unsecured, issued by a member of the Group in whole or in part for cash or otherwise;
- the principal amount raised by any member of the Group by acceptances or under (b) any acceptance credit opened on its behalf by any bank or accepting house other than acceptances relating to the purchase of goods in the ordinary course of trading and outstanding for not more than 90 days;
- the nominal amount of any issued share capital, and the principal amount of any (c) monies borrowed or other indebtedness, the redemption or repayment of which is guaranteed or secured or is the subject of an indemnity given by any member of the Group and the beneficial interest in the redemption or repayment of which is not owned within the Group; and
- the nominal amount of any issued share capital (not being equity share capital (d) which as regards capital has rights no more favourable than those attached to its ordinary share capital) of any subsidiary undertaking of the Company owned otherwise than by other members of the Group,

but "monies borrowed" shall not include and shall be deemed not to include:

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- amounts borrowed for the purpose of repaying the whole or any part (with or without premium) of any monies borrowed by any member of the Group then outstanding and so to be applied within six months of being so borrowed, pending their application for such purpose within such period; The second of th 18 m
- the proportion of the excess outside borrowing of a partly owned subsidiary (ii) undertaking which corresponds to the proportion of its equity share capitals and which is not directly or indirectly attributable to the Company and so that, for this purpose, the expression "excess outside borrowing" shall mean so much of the monies borrowed by such partly owned subsidiary undertaking otherwise than from members of the Group as exceeds the monies borrowed (if any) from and owing to it by other members of the Group.

When the aggregate amount of monies borrowed required to be taken into account for the purposes of this Article on any particular day is being ascertained, any of such monies denominated or repayable (or repayable at the option of any person other than the Company or any subsidiary undertaking) in a currency other than sterling shall be translated, for the purpose of calculating the sterling equivalent, at the rate(s) of exchange prevailing on that day in London, or on the last business day six months before such day if thereby such aggregate amount would be less (and so that for this purpose the rate of exchange prevailing shall be taken as the spot rate in London quoted at or about 11.00 a.m. on the day in question by a London clearing bank, approved by the Directors, as being the rate for the purchase by the Company of the currency and amount in question for sterling).

- A certificate or report by the Auditors as to the amount of the limit in Article 94.2 or the 94.4 aggregate amount of monies borrowed falling to be taken into account under Article 94.3 or to the effect that the limit imposed by this Article has not been or will not be exceeded at any particular time or times or during any period shall be conclusive evidence of such amount or fact for the purposes of this Article.
- No lender or other person dealing with the Company or any of its subsidiary undertakings 94.5 shall be concerned to see or inquire whether the said limit is observed, and no debt incurred or security given in excess of such limit shall be invalid or ineffectual, except in the case of express notice to the lender or the recipient of the security at the time when

the debt was incurred or security given that the said limit has been or would thereby be exceeded.

94.6 In this Article "subsidiary undertaking" means a subsidiary undertaking of the Company which is required by the Statutes to be included in consolidated group accounts.

# **POWERS AND DUTIES OF DIRECTORS**

# 95. Powers of Company vested in the Directors

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The business of the Company shall be managed by the Directors, who may exercise all the powers of the Company subject, nevertheless, to the provisions of these Articles and of the Statutes, and to such directions as may be given by the Company in general meeting by special resolution, provided that no alteration of the memorandum of association or these Articles and no such direction shall invalidate any prior act of the Directors which would have been valid if such alteration had not been made or such direction had not been given. The general powers conferred upon the Directors by this Article shall not be deemed to be abridged or restricted by any specific power conferred upon the Directors by any other Article.

# 96. Pensions, insurance and gratuities for Directors and others

96.1 The Directors may exercise all the powers of the Company to give or award pensions, annuities, gratuities or other retirement, superannuation, death or disability allowances or benefits (whether or not similar to the foregoing) to (or to any person in respect of) any persons who are or have at any time been Directors of or employed by or in the service of the Company or of any body corporate which is or was a subsidiary undertaking or a parent undertaking of the Company or another subsidiary undertaking of a parent undertaking of the Company or otherwise associated with the Company or any such body corporate, or a predecessor in business of the Company or any such/body corporate, and to the wives, widows, children and other relatives and dependants of any such persons and may establish, maintain, support, subscribe to and contribute to all kinds of schemes, trusts and funds (whether contributory or non-contributory) for the benefit of such persons as are hereinbefore referred to or any of them or any class of them, and so that any Director or former Director shall be entitled to receive and retain for his own benefit any such pension, annuity, gratuity, allowance or other benefit (whether under any such trust, fund or scheme or otherwise).

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96.2 Without prejudice to any other provisions of these Articles, the Directors may exercise all the powers of the Company to purchase and maintain insurance for or for the benefit of any persons who are or were at any time Directors, officers, employees or auditors of the Company, or of any other body (whether or not incorporated) which is or was its parent undertaking or subsidiary undertaking or another subsidiary undertaking of any such parent undertaking (together "Group Companies") or otherwise associated with the Company or any Group Company or in which the Company or any such Group Company has or had any interest, whether direct or indirect, or of any predecessor in business of any of the foregoing, or who are or were at any time trustees of (or directors of trustees of) any pension, superannuation or similar fund, trust or scheme or any employees' share scheme or other scheme or arrangement in which any employees of the Company or of any such other body are interested, including (without prejudice to the generality of the foregoing) insurance against any costs, charges, expenses, losses or liabilities suffered or incurred by such persons in respect of any act or omission in the actual or purported execution and/or discharge of their duties and/or the exercise or purported exercise of their powers and discretions and/or otherwise in relation to or in connection with their duties, powers or offices in relation to the Company or any such other body, fund, trust, scheme or arrangement.

### 97. Local boards

The Directors may make such arrangements as they think fit for the management and transaction of the Company's affairs in the United Kingdom and elsewhere and may from time to time and at any time establish any local boards or agencies for managing any of the affairs of the Company in any specified locality, and may appoint any persons to be members of such local board, or any managers or agents, and may fix their remuneration. The Directors from time to time, and at any time, may delegate to any person so appointed any of the powers, authorities, and discretions for the time being vested in the Directors (other than the powers of borrowing and of making calls), with power to subdelegate, and may authorise the members for the time being of any such local board, or any of them, to fill up any vacancies therein, and to act notwithstanding vacancies; and any such appointment or delegation may be made on such terms and subject to such conditions as the Directors may think fit, and the Directors may at any time remove any person so appointed, and may annul or vary any such delegation.

### 98. **Attorneys**

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The Directors may from time to time and at any time by power of attorney appoint any body corporate, firm or person or body of persons, whether nominated directly or indirectly by the Directors, to be the attorney or attorneys of the Company for such purposes and with such powers, authorities and discretions (not exceeding those vested in or exercisable by the Directors under these Articles) and for such period and subject to such conditions as they may think fit, and any such powers of attorney may contain such provisions for the protection and convenience of persons dealing with any such attorney as the Directors may think fit and may also authorise any such attorney to sub-delegate all or any of the powers, authorities and discretions yested in him. Lead  $s_{\rm color} = 200$ and the second of the second of

# Official seal

THE GROWS SAY SERVED TO A WILLIAM The Company may exercise the powers conferred by the Statutes with regard to having an official seal for use abroad and the powers conferred by section 40 of the Act with regard to having an official seal for sealing and evidencing securities, and such powers shall be vested in the Directors. \$185 to \$5000 mm.

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### 100. Overseas branch register

The Company may exercise the powers conferred upon the Company by the Statutes with regard to the keeping of an overseas branch register, and the Directors may (subject to the provisions of the Statutes) make and vary such regulations as they may think fit concerning the keeping of any such register.

### 101. Directors' permitted interests and entitlement to vote

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101.1 Subject to the provisions of the Statutes, a Director may hold any other office or place of profit under the Company, except that of Auditor, in conjunction with the office of Director and may act by himself or through his firm in a professional capacity for the Company, and in any such case on such terms as to remuneration and otherwise as the Directors may arrange. Any such remuneration shall be in addition to any remuneration provided for by any other Article. No Director or intending Director shall be disqualified by his office from entering into any contract, arrangement, transaction or proposal with the Company either with regard to his tenure of any such other office or place of profit or any such acting in a professional capacity or as a seller, buyer or otherwise. Subject to the provisions of the Statutes and save as therein provided no such contract, arrangement, transaction or proposal entered into by or on behalf of the Company in which any Director or person connected with him is in any way interested, whether directly or indirectly, shall be liable to be avoided, nor shall any Director who enters into any such contract, arrangement, transaction or proposal or who is so interested be liable to account to the Company for any profit or other benefit realised by any such contract, arrangement,

transaction or proposal by reason of such Director holding that office or of the fiduciary relationship thereby established, but he shall declare the nature of his interest in accordance with the Statutes.

- 101.2 Save as herein provided, a Director shall not vote in respect of any contract, arrangement, transaction or any other proposal whatsoever in which he has an interest which (together with any interest of any person connected with him within the meaning of section 346 of the Act) is to his knowledge a material interest otherwise than by virtue of interests in shares or debentures or other securities of or otherwise in or through the Company. A Director shall not be counted in the quorum at a meeting in relation to any resolution on which he is debarred from voting.
- 101.3 A Director shall (in the absence of some other material interest than is indicated below) be entitled to vote (and be counted in the quorum) in respect of any resolution concerning any of the following matters, namely:
  - the giving of any guarantee, security or indemnity in respect of money lent or obligations incurred by him or by any other person at the request of or for the benefit of the Company or any of its subsidiary undertakings;
  - (b) the giving of any guarantee, security or indemnity in respect of a debt or obligation of the Company or any of its subsidiary undertakings for which he himself has assumed responsibility in whole or in part under a guarantee or indemnity or by the giving of security;
- any proposal concerning an offer of securities of or by the Company or any of its subsidiary undertakings in which offer he is or may be entitled to participate as a holder of securities or in the underwriting or sub-underwriting of which he is to participate;

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- any contract, arrangement, transaction or other proposal concerning any other body corporate in which he or any person connected with him (within the meaning of section 346 of the Act) is interested, directly or indirectly and whether as an officer or shareholder or otherwise howsoever, provided that he and any persons so connected with him do not to his knowledge hold an interest (within the meaning of sections 198-211 of the Act) in one per cent. or more of any class of the equity share capital of such body corporate or of the voting rights available to members of the relevant body corporate;
  - (e) any contract, arrangement, transaction or other proposal for the benefit of employees of the Company or any of its subsidiary undertakings which does not accord to him any privilege or advantage not generally accorded to the employees to whom the scheme relates; and
  - (f) any proposal concerning any insurance which the Company is to purchase and/or maintain for the benefit of any Directors or for the benefit of persons including Directors.
  - 101.4 A Director shall not vote or be counted in the quorum on any resolution concerning his own appointment as the holder of any office or place of profit with the Company or any company in which the Company is interested including fixing or varying the terms of his appointment or the termination thereof.
  - 101.5 Where proposals are under consideration concerning the appointment (including fixing or varying the terms of appointment) of two or more Directors to offices or employments with the Company or any body corporate in which the Company is interested, such proposals may be divided and considered in relation to each Director separately and in such cases each of the Directors concerned (if not debarred from voting under paragraph

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101.3(d) of this Article) shall be entitled to vote (and be counted in the quorum) in respect of each resolution except that concerning his own appointment.

101.6 If any question shall arise at any meeting as to the materiality of an interest or as to the entitlement of any Director to vote and such question is not resolved by his voluntarily agreeing to abstain from voting, such question shall be referred to the chairman of the meeting and his ruling in relation to any Director other than himself shall be final and conclusive except in a case where the nature or extent of the interests of the Director concerned have not been fairly disclosed.

# 102. Exercise of Company's voting powers

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The Directors may exercise or procure the exercise of the voting rights conferred by the shares in any other body corporate held or owned by the Company or any power of appointment in relation to any other body corporate, and may exercise any voting rights or power of appointment to which they are entitled as directors of such other body corporate, in such manner as they shall in their absolute discretion think fit, including the exercise thereof in favour of appointing themselves or any of them as directors, officers or servants of such other body corporate, and fixing their remuneration as such, and may vote as Directors of the Company in connection with any of the matters aforesaid.

#### 103. Signing of cheques etc.

All cheques, promissory notes, drafts, bills of exchange and other negotiable instruments, and all receipts for monies paid to the Company, shall be signed, drawn, accepted, endorsed, or otherwise executed, as the case may be, in such manner as the Directors shall from time to time determine.

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# Minutes

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- 104.1 The Directors shall cause minutes to be made in books provided for the purpose:
  - (a) of all appointments of officers made by the Directors;
  - (b) of the names of the Directors present at each meeting of the Directors and of any committee of the Directors;

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- (c) of all resolutions and proceedings at all meetings of the Company, and of the Directors, and of committees of Directors.
- It shall not be necessary for Directors present at any meeting of Directors or committee of Directors to sign their names in the minute book or other book kept for recording attendance. Any such minute as aforesaid, if purporting to be signed by the chairman of the meeting at which the proceedings were had, or by the chairman of the next succeeding meeting, shall be receivable as prima facie evidence of the matters stated in such minutes without any further proof.

## **DISQUALIFICATION OF DIRECTORS**

## 105. Vacation of a Director's office

The office of a Director shall be vacated in any of the following events, namely:

- 105.1 if he ceases to be a Director by virtue of section 293 of the Act;
- 105.2 if a bankruptcy order is made against him or he makes any arrangement or composition with his creditors generally;
- 105.3 if he becomes prohibited by law from acting as a Director;

- if, in England or elsewhere, an order is made by any court claiming jurisdiction in that behalf on the ground (however formulated) of mental disorder for his detention or for the appointment of a guardian or receiver or other person to exercise powers with respect to his property or affairs;
- 105.5 if he resigns his office by notice to the Company or offers to resign and the Directors resolve to accept such offer;
- if, not having leave of absence from the Directors, he and his alternate (if any) fail to attend the meetings of the Directors for six successive months, unless prevented by illness, unavoidable accident or other cause which may seem to the Directors to be sufficient, and the Directors resolve that his office be vacated;
- if, by notice in writing delivered to or received at the Office or at some other address specified for the purpose of electronic communications or tendered at a meeting of the Directors, his resignation is requested by no less than three quarters of all of the Directors (but so that this shall be without prejudice to any claim such Director may have for damages for breach of any contract of service between him and the Company). In this Article 105.7 references to "in writing" shall include the use of electronic communications delivered to an address which has been specified by the Directors for the purpose of receiving such resignation request by means of electronic communications and subject to such terms and conditions, if any, as the Directors may decide.

#### RETIREMENT AND SUBMISSION FOR RE-ELECTION OF DIRECTORS

## 106. Regular submission of Directors for re-election

At every annual general meeting one-third of the directors who are subject to retirement by rotation or, if their number is not three or a multiple of three, the number nearest to one-third shall retire from office; but, if there is only one director who is subject to retire by rotation, he shall retire. Subject to the provisions of the Act, the directors to retire by rotation shall be those who have been longest in office since their last appointment or reappointment, but as between persons who became or were last reappointed directors on the same day those to retire shall (unless they otherwise agree among themselves) be determined by lot. A retiring director shall be eligible for reelection.

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## 107. Appointment of Directors by separate resolution

A single resolution for the appointment of two or more persons as Directors shall not be put at any general meeting, unless an ordinary resolution that it shall be so put has first been agreed to by the meeting without any vote being given against it.

## 108. Persons eligible for appointment

No person other than a Director retiring at the meeting shall, unless recommended by the Directors, be eligible for appointment to the office of Director at any general meeting unless not less than seven nor more than 42 days before the date appointed for the meeting there shall have been left at the Office notice in writing, signed by a Member duly qualified to attend and vote at such meeting, of his intention to propose such person for appointment, and also notice in writing signed by that person of his willingness to be appointed.

## 109. Casual vacancies and additional Directors - powers of Company

Subject as aforesaid, the Company may from time to time by ordinary resolution appoint a person who is willing to be a Director either to fill a casual vacancy or as an additional Director, and may also determine when any such appointed Director is to retire.

## 110. Casual vacancies and additional Directors - powers of Directors

The Directors shall have power at any time, and from time to time, to appoint any person to be a Director of the Company, either to fill a casual vacancy or as an addition to the existing Directors, but so that the total number of Directors shall not at any time exceed the maximum number, if any, fixed by or pursuant to these Articles. Any Director so appointed shall hold office only until the next following annual general meeting, and shall then be eligible for reappointment. If not reappointed at such meeting, he shall vacate office at the conclusion thereof.

## 111. Power of removal by ordinary resolution

The Company may by ordinary resolution, of which special notice has been given in accordance with the provisions of the Statutes, remove any Director before the expiration of his period of office notwithstanding anything in these Articles or in any agreement between the Company and such Director. Such removal shall be without prejudice to any claim such Director may have for damages for breach of any contract of service between him and the Company.

## 112. Appointment of replacement Director

Subject to Article 108, the Company may by ordinary resolution appoint another person in place of a Director removed from office under the immediately preceding Article. A person appointed in place of a Director so removed shall be treated (for the purpose of determining the time at which he is to retire) as if he had become a Director on the day on which the Director in whose place he is appointed was last appointed or reappointed a Director.

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# PROCEEDINGS OF DIRECTORS

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The Directors may meet for the despatch of business, adjourn and otherwise regulate their meetings as they think fit. Without prejudice to the foregoing, all or any of the Directors or of the members of any committee of the Directors may participate in a meeting of the Directors or of that committee by means of a conference telephone or any communication equipment which allows all persons participating in the meeting to hear each other and to address each other. A person so participating shall be deemed to be present in person at the meeting and shall be entitled to vote and be counted in the quorum accordingly. Such a meeting shall be deemed to take place where the largest group of those participating is assembled, or, if there is no such group, where the Chairman of the meeting is then present. The word "meeting" in these Articles shall be construed accordingly.

### 114. Quorum at board meetings

The Directors may determine the quorum necessary for the transaction of business. Until otherwise determined two Directors shall constitute a quorum.

## 115. Voting at board meetings

Questions arising at any meeting shall be decided by a majority of votes. In case of an equality of votes, the chairman of the meeting shall have a second or casting vote. A Director may, and the Secretary on the requisition of a Director shall, at any time summon a meeting of the Directors. It shall not be necessary to give notice of a meeting of Directors to a Director who is not within the United Kingdom. Any Director may waive notice of any meeting and any such waiver may be retrospective.

#### 116. Notice of board meetings

Notice of a meeting of the Directors shall be deemed to be duly given to a Director if it is given to him personally or by word of mouth or sent in writing to him at his last known address or any other address given by him to the Company for this purpose. A Director absent or intending to be absent from the United Kingdom may request the Directors that notices of meetings of the Directors shall during his absence be sent in writing to him at his last known address or any other address given by him to the Company for this purpose, whether or not out of the United Kingdom. In this Article 116 references to "in writing" include the use of electronic communications delivered to an address which has been specified by a Director for the purpose of his receiving notices of board meetings by means of electronic communications and subject to such terms and conditions, if any, as the Directors may decide.

#### 117. Directors below minimum

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The continuing Directors or sole continuing Director may act notwithstanding any vacancy in their body, but, if and so long as their number is reduced below the number fixed by or pursuant to these Articles as the necessary quorum of Directors, the continuing Directors or Director may act for the purpose of increasing the number of Directors to that number, or of summoning a general meeting of the Company, but for no other purpose.

#### 118. Appointment of chairman and deputy chairman of meetings

The Directors may elect one of their number as a chairman of their meetings, and one of their number to be the deputy chairman of their meetings and may at any time remove some either-of them from such office; but if no such chairman or deputy chairman is elected, or 🚧 🐠 🗇  $\dot{\beta}_{i}$  if at any meeting neither the chairman nor $\dot{\beta}$ the deputy chairman is present within five  $\dot{m}_{i}=3$  y minutes after the time appointed for holding the meeting and willing to act, the Directors game is also present-shall choose one of their number to be chairman of such meeting. The second section of

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#### Delegation of Directors' powers to committees 119.

(B) - (2種語·水源 (D) - (報) (11) WAR BOWN HE NOT BE BUILDING The Directors may delegate any of their powers or discretions (including without prejudice to the generality of the foregoing all powers and discretions whose exercise involves or may involve any payment to or the conferring of any other benefit on all or any of the Directors) to committees consisting of one or more members of their body. Insofar as any such power or discretion is delegated to a committee any reference in these Articles to the exercise by the Directors of such power or discretion shall be read and construed as if it were a reference to the exercise of such power or discretion by such committee. Any committee so formed shall in the exercise of the powers and discretions so delegated conform to any regulations that may from time to time be imposed by the Directors in default of which the meetings and proceedings of a committee consisting of more than one member shall be governed mutatis mutandis by the provisions of these Articles regulating the proceedings and meetings of the Directors. Any such regulations may provide for or authorise the co-option to the committee of persons other than Directors and for such co-opted members to have voting rights as members of the committee.

#### 120. Validity of Directors' acts

All acts done by any meeting of the Directors or of a committee of the Directors or by any person acting as a Director or as a member of a committee shall, notwithstanding that it be afterwards discovered that there was some defect in the appointment or continuance in office of any of the persons acting as aforesaid, or that any of such persons were disqualified from holding office or not entitled to vote, or had in any way vacated office, be as valid as if every such person had been duly appointed or had duly continued in office and was qualified and had continued to be a Director or member of the committee and was entitled to vote.

#### 121. Written resolution of Directors

A resolution in writing, signed by all the Directors for the time being entitled to receive notice of a meeting of the Directors or by all the members of a committee for the time being, shall be as valid and effective for all purposes as a resolution passed at a meeting duly convened and held, and may consist of two or more documents in like form each signed by one or more of the Directors or members of such committee. Such a resolution in writing need not be signed by an alternate Director if it is signed by the Director who appointed him.

#### MANAGING AND EXECUTIVE DIRECTORS

## 122. Appointment of executive Directors

Subject to the provisions of the Statutes the Directors may from time to time appoint one or more of their body to the office of Managing Director or to hold such other executive office in relation to the management of the business of the Company as they may decide, for such period and on such terms as they think fit, and, subject to the terms of any service contract entered into in any particular case and without prejudice to any claim for damages such Director may have for breach of any such service contract, may revoke such appointment. Without prejudice to any claim for damages such Director may have for breach of any service contract between him and the Company, his appointment shall be automatically determined if he ceases from any cause to be a Director.

### 123. Remuneration of executive Directors

The salary or remuneration of any Managing Director or such executive Director of the Company shall, subject as provided in any contract, be such as the Directors may from time to time determine, and may either be a fixed sum of money, or may altogether or in part be governed by the business done or profits made, and may include the making of provisions for the payment to him, his widow or other dependants, of a pension on retirement from the office or employment to which he is appointed and for the participation in pension and life assurance and other benefits, or may be upon such other terms as the Directors determine.

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## 124. Powers of executive Directors

The Directors may entrust to and confer upon a Managing Director or such executive Director any of the powers and discretions exercisable by them upon such terms and conditions and with such restrictions as they may think fit, and either collaterally with or to the exclusion of their own powers and discretions and may from time to time revoke, withdraw, alter or vary all or any of such powers or discretions.

## **SECRETARY**

## 125. Appointment and removal of Secretary

Subject to the provisions of the Statutes the Secretary shall be appointed by the Directors for such term, at such remuneration and upon such conditions as they think fit: and any Secretary may be removed by them.

#### THE SEAL

## 126. Use of Seal

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126.1 The Directors shall provide for the safe custody of the Seal and any official seal kept under section 40 of the Act, and neither shall be used without the authority of the Directors or of a committee of the Directors authorised by the Directors in that behalf. Every instrument

to which either shall be affixed shall be signed autographically by one Director and the Secretary or by two Directors, save that as regards any certificates for shares or debentures or other securities of the Company the Directors may by resolution determine that such signatures or either of them shall be dispensed with or affixed by some method or system of mechanical or electronic means.

126.2 Where the Statutes so permit, any instrument signed by one Director and the Secretary or by two Directors and expressed to be executed by the Company shall have the same effect as if executed under the Seal, provided that no instrument shall be so signed which makes it clear on its face that it is intended by the person or persons making it to be a deed without the authority of the Directors or of a committee authorised by the Directors in that behalf. The Directors may by resolution determine that such signatures or either of them shall be affixed by some method or system of mechanical or electronic means.

#### RESERVE

#### 127. Establishment of reserve

Directors may from time to time set aside out of the profits of the Company such sums as they think proper as a reserve or reserves which shall, at the discretion of the Directors, be applicable for any purpose to which the profits of the Company may be properly applied, and pending such application may, at the like discretion, either be employed in the business of the Company or be invested in such investments as the Directors think fit. The Directors may divide the reserve into such special funds as they think fit, and may consolidate into one fund any special funds or any parts of any special funds into which the reserve may have been divided as they think fit. The Directors may also without placing the same to reserve carry forward any profits which they may think prudent not to divide. শুক্রী কর্ম ক্রী ১৮৬ চ 

## **DIVIDENDS** and the a original and the state of the sta

#### Declarations of dividends by Company 128.

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The Company in general meeting may declare dividends, but no dividend shall exceed the amount recommended by the Directors.

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#### 129. Payment of interim and fixed dividends by Directors

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Subject to the provisions of the Statutes, the Directors:

- 129.1 may from time to time pay such interim dividends as they think fit;
- 129.2 may also pay the fixed dividends payable on any shares of the Company half-yearly or otherwise on fixed dates.

If the Directors act in good faith, they shall not incur any liability to the holders of shares conferring preferred rights for any loss they may suffer in consequence of the payment of an interim dividend on any shares having non-preferred or deferred rights.

#### 130. Restrictions on dividends

No dividend or interim dividend shall be paid otherwise than in accordance with the provisions of the Statutes.

#### 131. Calculation of dividends

Subject to the rights of persons, if any, entitled to shares with any priority, preference or special rights as to dividend, all dividends shall be declared and paid according to the amounts paid up on the shares in respect whereof the dividend is paid, but no amount paid up on a share in advance of calls shall be treated for the purpose of this Article as paid up on the share. All dividends shall be apportioned and paid proportionately to the amounts paid up on the shares during any portion or portions of the period in respect of which the dividend is paid; but if any share is issued on terms providing that it shall rank for dividend as if paid up in full or in part from a particular date, whether past or future, such share shall rank for dividend accordingly.

#### 132. Deductions of amounts due on shares and waiver of dividends

- 132,1 The Directors may deduct from any dividend or other monies payable to any Member on or in respect of a share all sums of money (if any) presently payable by him to the Company on account of calls or otherwise in relation to shares of the Company.
- 132.2 The waiver in whole or in part of any dividend on any share by any document (whether or not under seal) shall be effective only if such document is signed by the shareholder (or the person entitled to the share in consequence of the death or bankruptcy of the holder or otherwise by operation of law) and delivered to the Company and if or to the extent that the same is accepted as such or acted upon by the Company.

#### 133. Dividends other than in cash

Any general meeting declaring a dividend may, upon the recommendation of the Directors, direct payment of such dividend wholly or in part by the distribution of specific assets and in particular of paid up shares or debentures of any other body corporate, and the Directors shall give effect to such direction. Where any difficulty arises in regard to which such distribution, the Directors may settle the same as they thinkxexpedient, and ink ्रवृत्त particular may issue fractional certificates and fix the value for distribution of such specific ्र 👑 🏄 assets or any part thereof and may determine that cash payments shall be made to any 👑 ાં અંા Members upon the footing ફેof the value so fixed in order to adjust the rights∤of all parties). લ and may vest any such specific assets in trustees as may seem expedient to the Directors. 

#### 134. **Payment procedure**

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- All dividends and other distributions shall be paid (subject to any lien of the Company) to 134.1 those Members whose names shall be on the Register at the date at which such dividend shall be declared or at such other time and/or date as the Company by ordinary resolution or the Directors may determine.
- 134.2 The Company may pay any dividend or other monies payable in cash in respect of shares by direct debit, bank or other funds transfer system (subject always, in the case of uncertificated shares, to the facilities and requirements of the relevant system concerned, where payment is to be made by means of such system), or by cheque, dividend warrant or money order and may remit the same by post directed to the registered address of the holder or person entitled thereto (or, in the case of joint holders or of two or more persons entitled thereto, to the registered address of the person whose name stands first in the Register), or to such person and to such address as the holder or joint holders or person or persons may in writing direct, and the Company shall not be responsible for any loss of any such cheque, warrant or order nor for any loss in the course of any such transfer or where it has acted on any such directions. Every such cheque, warrant or order shall be made payable to, or to the order of, the person to whom it is sent, or to, or to the order of, such person as the holder or joint holders or person or persons entitled may in writing direct, and the payment of such cheque, warrant or order shall be a good discharge to the Company. Any one of two or more joint holders of any share, or any one of two or more persons entitled jointly to a share in consequence of the death or bankruptcy of the holder or otherwise by operation of law, may give effectual receipts for any dividends or other monies payable or property distributable on or in respect of the share.

#### 135. Interest

Subject to the rights attaching to, or the terms of issue of, any shares, no dividend or other monies payable on or in respect of a share shall bear interest against the Company.

#### 136. Forfeiture of dividends

All dividends or other sums payable on or in respect of any share which remain unclaimed may be invested or otherwise made use of by the Directors for the benefit of the Company until claimed. All dividends unclaimed for a period of 12 years or more after becoming due for payment shall be forfeited and shall revert to the Company. The payment of any unclaimed dividend or other sum payable by the Company on or in respect of any share into a separate account shall not constitute the Company a trustee thereof.

#### CAPITALISATION OF PROFITS AND SCRIP DIVIDENDS

### 137. Power to capitalise

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- 137.1 Subject to the provisions of Article 138, the Directors may capitalise any part of the amount for the time being standing to the credit of any of the Company's reserve accounts (including any share premium account and capital redemption reserve) or to the credit of the profit and loss account (in each case, whether or not such amounts are available for distribution), and appropriate the sum resolved to be capitalised either:
- to the holders of ordinary shares (on the Register at such time on such date as may be specified in, or determined as provided in, the resolution of the general meeting granting authority for such capitalisation) who would have been entitled thereto if distributed by way of dividend and in the same proportions; and the Directors shall apply such sum on their behalf either intor towards paying up any amounts, if any, for the time being unpaid on any shares held by such holders of ordinary shares respectively or in paying up in full at parsunissued shares or debentures of the Company to be allotted credited as fully paid up to such holders of ordinary shares in the proportions aforesaid, or partly in the one way and partly in the other; or

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137.3 to such holders of ordinary shares who may, in relation to any dividend or dividends, validly accept an offer or offers on such terms and conditions as the Directors may determine (and subject to such exclusions or other arrangements as the Directors may consider necessary or expedient to deal with legal or practical problems in respect of overseas shareholders or in respect of shares represented by depository receipts) to receive new ordinary shares, credited as fully paid up, in lieu of the whole or any part of any such dividend or dividends (any such offer being called a "Scrip Dividend Offer"); and the Directors shall apply such sum on their behalf in paying up in full at par unissued shares (in accordance with the terms, conditions and exclusions or other arrangements of the Scrip Dividend Offer) to be allotted credited as fully paid up to such holders respectively.

### 138. Authority required

- The authority of the Company in general meeting shall be required before the Directors implement any Scrip Dividend Offer (which authority may extend to one or more offers).
- 138.2 The authority of the Company in general meeting shall be required for any capitalisation pursuant to Article 137.1 above.
- 138.3 A share premium account and a capital redemption reserve and any other amounts which are not available for distribution may only be applied in the paying up of unissued shares to be allotted to holders of ordinary shares of the Company credited as fully paid up.

#### 139. Provision for fractions etc.

Whenever a capitalisation requires to be effected, the Directors may do all acts and things which they may consider necessary or expedient to give effect thereto, with full power to the Directors to make such provision as they think fit for the case of shares or debentures becoming distributable in fractions (including provisions whereby fractional entitlements are disregarded or the benefit thereof accrues to the Company rather than to the Members concerned) and also to authorise any person to enter on behalf of all Members concerned into an agreement with the Company providing for any such capitalisation and matters incidental thereto and any agreement made under such authority shall be effective and binding on all concerned.

#### **ACCOUNTING RECORDS**

#### 140. Accounting records to be kept

The Directors shall cause accounting records to be kept in accordance with the provisions of the Statutes.

#### 141. Location of accounting records

The accounting records shall be kept at the Office or, subject to the provisions of the Statutes, at such other place or places as the Directors think fit.

#### 142. Inspection of accounting records

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The Directors shall from time to time determine whether and to what extent and at what 🕩 was group as 🛁 times and places and under what conditions or regulations the accounting records of the 🖼 🕏 Company or any of them shall be open to the inspection of Members not being Directors.

#### 144. Limit on Members' right to inspect

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No Member (not being a Director) shall have any right of inspecting any account or book or document of the Company except as conferred by statute or authorised by the Directors or by the Company in general meeting.

## **AUDIT**

#### 145. **Appointment of Auditors**

Auditors shall be appointed and their duties regulated in accordance with the provisions of the Statutes.

#### **NOTICES**

#### 146. Service of notice and curtailment of postal service

- A notice or other document (including a share certificate) may be given by the Company 146.1 to any Member:
  - (a) personally; or

- (b) by sending it by post addressed to him at his registered address or (if he has no registered address within the United Kingdom) to the address, if any, within the United Kingdom supplied by him to the Company for the giving of notice to him, or
- (c) by sending it using electronic communication to an address for the time being notified for that purpose to the Company by that Member in a manner specified by the Directors or as otherwise permitted by the Statutes.
- 146.2 If at any time by reason of the suspension or any curtailment of postal services in the United Kingdom or of means of electronic communication, the Company is unable in the opinion of the Directors effectively to convene a general meeting by notices sent through the post or (in the case of those Members in respect of whom an address has for the time being been notified to the Company, in a manner specified by the Directors, for the purpose of giving notices by electronic communication) by electronic communication, a general meeting may be convened by a notice advertised in at least one national newspaper and such notice shall be deemed to have been duly served on all Members and other persons entitled thereto at noon on the day when the advertisement has appeared. In any such case the Company shall send confirmatory copies of the notice by post or (as the case may be) by electronic communication if at least seven days prior to the date of the general meeting the posting of notices to addresses throughout the United Kingdom or (as the case may be) the sending of notices by electronic communication again becomes, in the opinion of the Directors, practicable.

#### 147. Members resident abroad

A Member who has no registered address within the United Kingdom, and has not supplied to the Company an address within the United Kingdom, shall not be entitled to receive any notice or other documents from the Company. Without prejudice to the generality of the foregoing such a Member shall not be entitled to receive any notice or other documents from the Company even if he has supplied an address for the purpose of receiving electronic communications and a second se

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- 148.1 Where a notice or other document is sent by post, service of the notice or other document shall be deemed to be effected by properly addressing, prepaying, and posting a letter containing the notice or other document, and to have been effected at the latest at the expiration of 24 hours if prepaid as first-class and at the latest at the expiration of 72 hours if prepaid as second-class after the letter containing the same is posted. In proving such service it shall be sufficient to prove that the letter containing the same was properly addressed and stamped and put in the post.
- 148.2 Where a notice or other document is sent using electronic communications, service of the notice or other document shall be deemed to be effected by sending it using electronic communications to an address for the time being notified to the person giving the notice or as otherwise permitted by the Statutes for that purpose, and to have been effected at the latest at the expiration of 24 hours from when it was sent. In proving such service it shall be sufficient to prove that the notice or other document was sent in accordance with guidance from time to time issued by the Institute of Chartered Secretaries and Administrators.

#### 149. Notice to joint holders

A notice or other document may be given by the Company to the joint holders of a share by giving the notice or other document to the joint holder first named in the Register in respect of the share.

#### 150. Service of notice on persons entitled by transmission

A notice or other document may be given by the Company to the persons entitled to a share in consequence of the death or bankruptcy of a Member or otherwise by operation of law by sending it through the post in a prepaid letter, or by sending it using electronic communication as hereinafter mentioned, in each case addressed to them by name, or by the title of representatives of the deceased, or trustee of the bankrupt, or by any like description, to (in the case of a notice or other document being sent through the post) the address, if any, within the United Kingdom supplied for the purpose by the persons claiming to be so entitled or (in the case of a notice or other document being sent by using electronic communication) to an address for the time being notified for that purpose by such persons to the Company, in a manner specified by the Company, by those persons or as otherwise permitted by the Statutes, or (until such an address has been so supplied or notified) by giving the notice or other document in any manner in which the same might have been given if the death or bankruptcy or other event had not occurred.

#### **ELECTRONIC COMMUNICATION**

#### 151. **Electronic Communication**

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Notwithstanding anything in these Articles to the contrary, but subject to the Statutes:

- any notice or other document to be given or sent to any person by the Company is (a) also to be treated as given or sent where:
  - (ii) a the Company and that person have agreed that any notice or other. instead be a document required to be given or sent to that person may instead be a Before daccessed by him on a web site; 1966年 1967年 1168年 1188日 : 25% &

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- (ii) the meeting (in the case of a notice of meeting) of other document (in any other case) is one to which that agreement applies? and the second second
- (iii) that person is notified, in a manner for the time being agreed between him and the Company, of the publication of the notice or (as the case may be) other document on a web site, the address of that web site and the place on that web site where the notice or (as the case may be) other document may be accessed and how it may be accessed;
- in the case of a notice of meeting, such notice of meeting is published in (iv) accordance with Article 151(b) below and the notification referred to in (iii) above states that it concerns a notice of a company meeting served in accordance with the Act; specifies the place, date and time of the meeting; and states whether the meeting is to be an annual or extraordinary general meeting; and
- in the case of a document referred to in section 238 of the Act, and in the (v) case of a document comprising a summary financial statement referred to in section 251 of the Act, such document is published in accordance with Article 151(b) below;

and, in the case of a notice of meeting or other document so treated, such notice or other document is to be treated as so given or sent, as the case may be, at the time of the notification mentioned in (iii) above; and

(b) where a notice of meeting or other document is required by Article 151(a)(iv) or (v) above to be published in accordance with this Article 151(b), it shall be treated as so published only if:

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- (i) in the case of a notice of meeting, the notice is published on the web site throughout the period beginning with the giving of the notification referred to in Article 151(a)(iii) above and ending with the conclusion of the relevant meeting; and
- (ii) in the case of a document referred to in Article 151(a)(v) above, the document is published on the web site throughout the period beginning at least 21 days before the date of the relevant meeting and ending with the conclusion of the meeting and the notification referred to in Article 151(a)(iii) above is given not less than 21 days before the date of the meeting,

but so that nothing in this Article 151(b) shall invalidate the proceedings of the meeting where the notice or other document is published for a part, but not all, of the period mentioned in (i) or, as the case may be, (ii) of this Article 151(b) and the failure to publish the notice or other document throughout that period is wholly attributable to circumstances which it would not be reasonable to have expected the Company to prevent or avoid; and

(c) the Directors may from time to time make such arrangements or regulations (if any) as they may from time to time in their absolute discretion think fit in relation to the giving of notices or other documents by electronic communication by or to the Company and otherwise for the purpose of implementing and/or supplementing the provisions of these Articles and the Statutes in relation to electronic communication; and such arrangements and regulations (as the case may be) shall have the same effect as if set out in this Article.

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## **PROVISION FOR EMPLOYEES**

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The power conferred upon the Company by section 719 of the Act to make provision for the benefit of persons employed or formerly employed by the Company or any of its subsidiaries, in connection with the cessation or the transfer to any person of the whole or part of the undertaking of the Company or any subsidiary shall only be exercised by the Company with the prior sanction of a special resolution. If at any time the capital of the Company is divided into different classes of shares, the exercise of such power as aforesaid shall be deemed to be a variation of the rights attached to each class of shares in issue and shall accordingly require either (i) the prior consent in writing of the holders of three-fourths of the issued shares or (ii) the prior sanction of an extraordinary resolution passed at a separate general meeting of the holders of the shares of each class, in accordance with the provisions of Article 16.

## WINDING UP

#### 153. Distribution of assets

153.1 If the Company shall be wound up the liquidator may, with the sanction of an extraordinary resolution of the Company and any other sanction required by the Statutes, divide amongst the Members in specie or in kind the whole or any part of the assets of the Company (whether they shall consist of property of the same kind or not) and may, for such purpose, set such value as he deems fair upon any property to be divided as aforesaid and may determine how such division shall be carried out as between the Members or different classes of Members. The liquidator may, with the like sanction, vest the whole or any part of such assets in trustees upon such trusts for the benefit of the contributories as the liquidator, with the like sanction, shall think fit, but so that no Member shall be compelled to accept any shares or other securities or other assets whereon there is any liability.

#### INDEMNITY

## 154. Indemnity of officers

Subject to the provisions of the Statutes but without prejudice to any indemnity to which the person concerned may otherwise be entitled, every person who is or was at any time a Director or other officer or Auditor of the Company shall be indemnified out of the assets of the Company against all costs, charges, expenses, losses or liabilities which he may sustain or incur in or about the actual or purported execution and/or discharge of the duties of his office and/or the exercise or purported exercise of his powers or discretions and/or otherwise in relation thereto or in connection therewith, including (without prejudice to the generality of the foregoing) any liability incurred by him in defending any proceedings, whether civil or criminal, in which judgment is given in his favour or in which he is acquitted or in connection with any application under section 144(3) or (4) or section 727 of the Act, in which relief is granted to him by the Court.

## **APPENDIX 3**

Special resolutions from extraordinary general meeting on February 24, 2004

No: 4313987

# RECEIVED

# ZON JUL 15 THE COMPANIES ACT 1985





COMPANIES HOUSE

## ARK THERAPEUTICS GROUP PLC

At an extraordinary general meeting of Ark Therapeutics Group plc duly convened and held on 24 February 2004, the following special resolution was passed:

#### SPECIAL RESOLUTION

- THAT notwithstanding the provisions of the Company's articles of association or the terms 1. of any shareholders' agreement, conditional upon and simultaneously with Admission ("Admission" being the admission of the Company's shares to the Official List of the Financial Services Authority (acting in its capacity as the competent authority for the purposes of Part VI of the Financial Services and Markets Act 2000) and to trading on the listed securities market of the London Stock Exchange plc becoming effective):
- 1.1 immediately prior to the taking effect of paragraph 3.2, each 'A' Ordinary Share of 0.02 pence each shall automatically convert into one Ordinary Share of 0.02 pence each, and each 'B' Ordinary Share of 0.02 pence each shall automatically convert into 1.184 Ordinary Shares of 0.02 pence each (with any resultant fractions of shares of Ordinary Shares being rounded up or down to the nearest whole number, for which purpose the Directors may the given capitalise such sum as they may, in their absolute discretion, determine by paying up in full ूर, such number of unissued Ordinary Shares of 0.02 pence each, to be allotted credited as क्रीन fully paid, as may be necessary, including to satisfy the rounding up of any such otherwise -> fractional entitlements);
- immediately after the taking effect of paragraph 3.1, such sum as the Directors may, in the control of the cont 1.2 their absolute discretion, determine (not exceeding an amount equal to the amount way standing to the credit of the share premium account of the Company immediately after Admission) be capitalised by paying up in full unissued Ordinary Shares of 0.02 pence each to be allotted credited as fully paid to shareholders on the register of members of the Company immediately prior to Admission on the basis of 99 Ordinary Shares of 0.02 pence each for every 1 Ordinary Share of 0.02 pence held by such shareholders;
- 1.3 immediately following the allotment of shares pursuant to paragraph 3.2, the Ordinary Shares of 0.02 pence each in the capital of the Company be automatically consolidated into Ordinary Shares of 1 pence each, on the basis of 1 Ordinary Share of 1 pence for every 50 Ordinary Shares of 0.02 pence each;
- 1.4 new articles of association in the form contained in the draft articles of association produced to the meeting (marked 'A') and initialled by the chairman for the purposes of identification be adopted as the articles of association of the Company In substitution for and to the exclusion of all previous articles of association;
- 1.5 the authorised share capital of the Company be increased to £2,000,000 (immediately after the taking effect of paragraph 3.8 below) by the creation of an additional 100,030,000 Ordinary Shares of 1 pence each having the rights and being subject to the restrictions and obligations set out in the articles of association to be adopted by paragraph 3.4;
- 1.6 the Directors be and are hereby generally and unconditionally authorised for the purposes of section 80(1) of the Companies Act 1985 (the "Act") to exercise all the powers of the Company to allot relevant securities (within the meaning of section 80(2) of the Act) as shall be determined by the Directors up to an aggregate nominal amount of £1,991,913.38

provided always that in the case of any allotment (other than allotments of (i) Ordinary Shares pursuant to or as contemplated by any agreement relating to an offering of Ordinary Shares (the "Offer") proposed to be made between, inter alia, the Company, Credit Suisse First Boston (Europe) Limited, Credit Suisse First Boston Equities Limited and Nomura International plc in connection with Admission, (ii) Ordinary Shares of 0.02 pence each pursuant to paragraph 3.2 or (iii) Ordinary Shares of 1 pence each pursuant to paragraph 3.8 (together, the "Initial Allotments")) such authority shall be limited to the allotment of relevant securities up to an aggregate nominal amount equal to one third of the aggregate nominal amount of all Ordinary Shares of 1 pence each issued and fully paid immediately after Admission, and provided further that such authority shall expire on the date falling 15 months after the date of Admission or, if earlier, at the conclusion of the Company's annual general meeting to be held in 2005 (save that the Company may allot relevant securities pursuant to an offer or agreement entered into prior to such expiry), and such authority to be in substitution for any and all authorities previously conferred upon the Directors for the purposes of section 80 of the Act;

- 1.7 the Directors be and are hereby generally and unconditionally empowered to allot equity securities for cash pursuant to the authority referred to in paragraph 3.6 as if the pre-emption rights in section 89(1) of the Act did not apply provided that such power shall be limited to:
  - (a) the Initial Allotments;
  - the allotment of equity securities for cash in consideration with or pursuant to a rights issue or any other offer in favour of the holders of equity securities and other persons entitled to participate therein in proportion to the respective amounts of equity securities then held by them, but subject to such exclusions or other arrangements as the Directors may consider necessary, expedient or appropriate to deal with any fractional entitlements or legal or practical difficulties in any territory; and
  - (c) the allotment of equity securities for cash up to an aggregate nominal amount equal to 5 per cent. of the aggregate nominal amount of all Ordinary Shares issued and fully paid immediately after Admission,

provided that such power shall expire on the date falling 15 months after the date of Admission or, if earlier, at the conclusion of the Company's annual general meeting to be held in 2005;

all of the issued Management Shares (as defined in the articles of association of the Company in existence at the date hereof immediately prior to the adoption of the new articles pursuant to paragraph 3.4 (the "Current Articles")) be redeemed by the Company using the proceeds of the Offer, and that the holders of the Management Shares be issued such number of Ordinary Shares as calculated in accordance with the provisions of article 7.A.2.1 of the Current Articles.

Martyn Williams Company Chairman

Presented by: Ashurst

Broadwalk House 5 Appold Street London EC2A 2HA Tel: 020 7638 1111 Ref: DPA/ARK02.00001

# **APPENDIX 4**

Intellectual Property Licence and Revenue-Sharing Deed of Agreement, dated February 12, 2004

4313987

PRIVATE & CONFIDENTIAL

Wragge&Co

RECEIVED

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CORPORATE FINATIONAL

DATED M February 2004

- IMPERIAL COLLEGE INNOVATIONS LIMITED (1)
  - ARK THERAPEUTICS LIMITED (2)

and

ARK THERAPEUTICS GROUP LIMITED (3)

INTELLECTUAL PROPERTY LICENCE AND REVENUE-SHARING DEED OF AGREEMENT

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## THIS DEED is made on

12 Mh V February

## BETWEEN:

- (1) IMPERIAL COLLEGE INNOVATIONS LIMITED ("Innovation in England (No. 2060639) whose registered office is at Sherfield Burking, imperial College, Exhibition Road, London SW7 2AZ; and
- (2) ARK THERAPEUTICS LIMITED ("Ark") registered in England (No.3351628) whose registered office is at 1 Fitzroy Mews, London W1T 6DE; and
- (3) ARK THERAPEUTICS GROUP LIMITED ("Ark Group") registered in England (No. 4313987) whose registered office is at 1 Fitzroy Mews, London W1T 6DE

## **BACKGROUND:**

- (A) Innovations is a wholly-owned subsidiary of Imperial College of Science, Technology and Medicine ("Imperial"). Imperial developed and owned the Confidential Data (as defined below). Imperial has assigned to Innovations all its right, title and interest in the Confidential Data.
- (B) Ark is the registered proprietor of or applicant for the Cachexia Patents (as defined below) for the use of ACE inhibitors in the treatment of various disorders. Ark is a wholly owned subsidiary of Ark Group.
- (C) In October 1998, Innovations disclosed the Confidential Data to Ark pursuant to terms negotiated between Innovations and Ark. The parties have now agreed the terms of the disclosure on a binding basis in this Agreement. Such terms include the allotment to Innovations of certain shares in Ark Group and the payment of royalties to Innovations.

## THIS DEED WITNESSETH AS FOLLOWS:

## 1 Definitions

- 1.1 In this Agreement unless the context otherwise requires:
  - "Accounting Dates" means 31 March, 30 June, 30 September, 31 December in each Year during the Term;
  - "Accounting Period" means the 3 month period immediately preceding the relevant Accounting Date;

# "Active Ingredient" means:

- (a) Imidapril and derivatives of Imidapril; and
- (b) all inhibitors of the renin-angiotension system for use in the treatment of muscle-wasting and/or cachexia (but not for the avoidance of doubt any other indications including lipodystrophy, HARS (HIV-related adipose redistribution syndrome) and related disease states) arising from any cause (including AIDS, HIV-infection, cancer and heart failure);

"Affiliate" means in relation to a party any company, academic institution or business entity controlled by, controlling, or under common control with that party. For this purpose, "control" means the right to exercise or the right to be able to exercise or the right to acquire the power to direct the policies and affairs of a party whether by statute, governmental device or regulation, contract or ownership or direct or indirect control of the majority of voting rights in such party;

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# "Agreement" means this deed;

"Business Day" means a day (other than a Saturday or Sunday) on which the banks are ordinarily open for business in the City of London;

"Cachexia Patents" means any one or all of the patents and applications listed in Part 1 of Schedule 2 and any patents which derive from or claim priority from such applications or which claim priority from any of the Superseded Patents, or any divisions, grants, reissues, extensions, renewals, continuations, continuations in part thereof together with any Supplementary Protection Certificates in the Field granted to Ark, its Affiliates or Licensees in respect thereof;

# "Commencement Date" means the date of this Agreement;

"Confidential Data" means the data in Schedule 1 hereto which was presented as examples 3 to 5 in International Patent Publication WO 99/20260 as published on 29 April 1999;

"Confidential Information" means commercial, financial, marketing, technical or other information, know-how, trade secrets and other information in any form or medium including any and all such information disclosed by one party to the other pursuant to its obligations under this Agreement, whether disclosed orally or in writing before or after the date of this Agreement, which either in its entirety or in the precise configuration or assembly of its components, is not publicly available;

"Consideration Shares" means 175,000 ordinary shares of 0.02 pence each in Ark Group defined as "Ordinary Shares" in the articles of association of Ark Group (a copy of the current version of which is attached as Schedule 4 hereto);

"Field" means the clinical indications of muscle-wasting and cachexia. For the avoidance of doubt the Field shall not include any other clinical indications including lipodystrophy, HARS (HIV-related adipose redistribution syndrome) and related disease states;

"Financial Year" means any twelve month period starting on 1 January in any year of the Term;

"Force Majeure" means any event outside the reasonable control of either party affecting its ability to perform any of its obligations under this Agreement including Act of God, fire, flood, lightning, war, revolution, act of terrorism, riot or civil commotion:

"Freedom-to-Operate Licence" means a licence granted by Ark, its Affiliates or any assignee of the Cachexia Patents to a third party under the claims of the Cachexia Patents for the development, manufacture, use, import or sale of therapeutic products

in the Field, where such products have not been developed, manufactured, used, imported or sold in any substantial way or in any substantial part by Ark, its Affiliates or assignees of the Cachexia Patents;

"Improvement" means any development, improvement, modification or adaptation made to any of the Cachexia Patents or the Confidential Data by Innovations or any of its Affliates;

"Know-How" means any Ark or Ark Group technical information, knowledge, inventions, experience, data, regulatory dossiers, manufacturing data and processes and other information or materials relating to the development, manufacture importation, use or sale of Products;

"Letter" means the letter from Wragge & Co to Ark dated 1 September 2003;

"Licence Receipts" means any amount received by Ark, its Affiliates and/or assignees of the Cachexia Patents as consideration for grant of a licence under or assignment of the Cachexia Patents and/or Know-How in the Field including upfront fees, annual fees, milestone payments, royalties and any other form of consideration, but excluding any royalties paid by a Licensee to Ark or its Affiliates in respect of Net Sales (including any royalties paid in advance of the sale or supply of Products or any amounts paid in lieu of any royalties unpaid as a result of a failure by any Licensee to achieve any minimum sales targets agreed with such Licensee). For the avoidance of doubt, royalties paid to Ark under a Freedom-to-Operate Licence shall be included within Licence Receipts;

"Licensee" means any licensee, sub-licensee, or assignee of any of the Cachexia Patents and/or Know-How in the Field;

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"Net Sales" means the gross amount received or invoiced (including any lump sum, milestone or other payments) by Ark, its Affiliates and/or Licensees (except those Licensees acting only under a Freedom-to-Operate Licence) in relation to the sale and/or supply of Products in the Territory (but excluding Licence Receipts and any amounts received or invoiced in relation to a Freedom-to-Operate Licence) less any VAT, any other applicable sales tax, or customs duties or levies actually paid in connection with the sale or supply of the relevant Products (but excluding what are commonly known as income taxes) and less any cash or other discounts or rebates, or allowances for defective products or returns given or granted by Ark or its Affiliates or relevant Licensees in respect of any Product. Gross amounts received or invoiced (including any lump sum, milestone or other payment) by Tanabe from sale and/or supply of Product to independent third parties in the countries listed in Schedule 3 for the treatment of patients in those countries shall not be taken into account for this purpose and therefore shall be excluded from the definition of Net Sales;

"Product" means any product formulation or substance (in any form) in the Field which falls within any of the claims of the Cachexia Patents at the Commencement Date including the Active Ingredient. For the avoidance of doubt it is acknowledged by Ark that both Imidapril and Ark's product known as EG006 fall within the claims of the Cachexia Patents at the Commencement Date;

"Royalties" means the payments calculated in accordance with clauses 5.1(b), (c) and (d);

"Superseded Patents" means the superseded patent applications listed in Part 2 of Schedule 2;

"Supplementary Protection Certificates" means a certificate granted pursuant to Article 10 of Council Regulation No. 1768/92/EC of 18 June 1992 in respect of a medicinal product approved for sale or supply under a relevant marketing authorisation together with rights granted under any analogous legislation or regulation in other territories;

"Tanabe" means Tanabe Seiyaku Company Limited of 2-10 Dosho machi 3 chome, Chuo ku, Osaka, Japan, its Affiliates and/or its Licensees;

"Term" means the term of this Agreement as defined in clause 6 below;

"Territory" means the world;

"Year" means the period of 12 months commencing on the Commencement Date and on each successive anniversary of the Commencement Date and ending on the day before each successive anniversary of the Commencement Date.

- 1.2 The headings to clauses are inserted for convenience only and shall not affect the interpretation or construction of this Agreement.
- 1.3 Words imparting the singular shall include the plural and vice versa. References to persons include an individual, company, corporation, firm or partnership.
- 1.4 All sums payable under this Agreement are exclusive of VAT or any other applicable tax or duty payable upon such sums which shall be added if appropriate at the rate prevailing at the relevant tax point.
- 1.5 The words and phrases "other", "including" and "in particular" shall not limit the generality of any preceding words or be construed as being limited to the same class as any preceding words where a wider construction is possible.
- 1.6 References to any statute or statutory provision shall include (i) any subordinate legislation made under it, (ii) any provision which it has superseded or re-enacted (whether with or without modification), and (iii) any provision which subsequently supersedes it or re-enacts it (whether with or without modification).

# 2 Grant of Rights to Ark

2.1 Subject to clause 2.4, Innovations confirms that with effect from 16 October 1998 it granted to Ark a sole, irrevocable and perpetual licence to use the Confidential Data for any purpose and to permit any third party to use the Confidential Data in the Field in the Territory. Innovations will prior to the grant of any patents which claim priority from International Patent Publication WO 00/21509 arrange for the deletion of the Confidential Data from all pending applications therefor, following which such licence will become an exclusive licence. In the meantime, Innovations will not exploit its rights in the Confidential Data and will only use them insofar as it is necessary for the

continued existence of such pending applications.

- 2.2 Ark may sub-license its rights to use the Confidential Data to make or sell Products provided that:
  - (a) Ark shall consult with Innovations in the event Ark becomes aware that any Licensee is failing to comply with such provisions in the sub-licence as relate to the provisions in this Agreement and shall consider in good faith any representations made by Innovations as to what actions Ark may take in order to require any such Licensee to comply with such provisions; and
  - (b) Within 30 days of the grant of any such sub-licence, Ark shall notify Innovations of the grant of such sub-licence and Ark shall provide to Innovations a true copy of such sub-licence if Ark is entitled so to do and for this purpose Ark shall use all reasonable endeavours to ensure that it is so entitled.
- 2.3 Save as set out in this Agreement, Ark has no other right to sub-license its rights to use the Confidential Data.
- 2.4 Innovations reserves the non-exclusive right for it and its Affiliates to use the Confidential Data for the purposes of academic research and teaching.

# 3 Licensing of the Cachexia Patents

- 3.1 Ark grants to Innovations and its Affiliates a non-exclusive, royalty-free, irrevocable and perpetual licence to use the Cachexia Patents solely for the purposes of academic research and teaching.
- 3.2 In the event that Ark licenses the right to use the Cachexia Patents and/or Know-How to make, use or sell Products it shall:
  - (a) within 30 days of the grant of any such licence, provide to Innovations a true copy of such licence (if it is entitled to do so), or in the event that it is not entitled to do so, within that same 30 day period notify Innovations of the substantive terms of such licence (if it is so entitled and for both these purposes Ark shall use all reasonable endeavours to ensure that it is so entitled), or, in the event that it is not entitled to do either, within that same 30 day period notify Innovations of the grant of such licence; and
  - (b) promptly notify Innovations in the event that there is any difficulty in collecting Licence Receipts and royalties from its Licensee and consult with Innovations in good faith as to what actions Ark should take in order to ensure that such Licensee complies with its obligations under the licence.

# 4 Improvements

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4.1 For a period of three years from the Commencement Date, in the event that Innovations becomes aware of any Improvement or if it acquires any Improvement which might reasonably be of commercial interest to Ark, Innovations shall, and shall use its reasonable endeavours to procure that all of its Affiliates shall, disclose to Ark in confidence and in such detail as Ark may reasonably require all such Improvements,

to the extent it is entitled to do so (and for this purpose Innovations shall use all reasonable endeavours to ensure that it is so entitled).

4.2 Innovations shall not and shall use its reasonable endeavours to procure that its Affiliates shall not publish any information relating to any Improvements required to be disclosed to Ark in accordance with clause 4.1 until such time as Ark has had a reasonable period (not exceeding 30 Business Days) in which to evaluate such Improvements. If entitled to do so and, if requested within such period so to do, Innovations shall grant Ark a right of first refusal to take a licence of any such Improvements on commercial terms to be agreed between the parties as between a willing buyer and a willing seller. During negotiations for any such licence, Innovations shall not and shall use its reasonable endeavours to procure that none of its Affiliates shall publish the same or do anything that might prejudice the validity of any patents that might subsequently be granted in respect of any such Improvements. Insofar as Innovations grants Ark first refusal to take such a licence, and if such a licence from Innovations to Ark is not executed within 60 Business Days thereafter, Innovations shall be released from any obligations in respect of the Improvements in question.

# 5 Payments and Allotment of Shares

- 5.1 In consideration of the settlement set out in clause 16.3 and of the licence to be granted by Innovations to Ark in respect of the Confidential Data:
  - (a) Ark shall pay Innovations £50,000 (fifty thousand pounds sterling), within 5 Business Days of the Commencement Date as a contribution to Innovations' legal fees and costs in respect of the matters settled pursuant to this Agreement;
  - (b) Subject to clauses 5.2 and 8.2 below, Ark will make royalty payments to Innovations in relation to the sale or supply of Products by Ark or its Affiliates as follows:
    - (i) 1% (one per cent) of all Net Sales in any Financial Year during the Term up to and including an aggregate total Net Sales value of £500,000,000 (five hundred million pounds sterling) for such Financial Year; and
    - (ii) 2% (two per cent) of all Net Sales in any Financial Year during the Term exceeding an aggregate total Net Sales value of £500,000,000 (five hundred million pounds sterling) for such Financial Year.
  - (c) Subject to clauses 5.2 and 8.2 below, Ark will make royalty payments to Innovations in relation to the sale or supply of Products by its Licensees in any particular part of the Territory which has been separately licensed under the Cachexia Patents and/or Confidential Data to a Licensee or Licensees, which licence or series of licences granted to such Licensee or Licensees may fairly and reasonably be regarded as separate and independent of other licences granted to Licensees in neighbouring parts of the Territory, whether as a result of geographical, political, commercial or economic reasons ("Licensed Territory"), as follows where:

- P = Net Sales by the authorised Licensees in the Licensed Territory in countries in which any of the Cachexia Patents subsist
- T = Total Net Sales by the authorised Licensees in the Licensed Territory; and
- (i) on Net Sales in any Financial Year during the Term up to and including an aggregate total Net Sales value of £500,000,000 (five hundred million pounds sterling) for such Financial Year where
  - (aa) if  $\frac{P}{T}$  is more than 75%, then the royalty shall be 1% of Net Sales by the authorised Licensees in such Licensed Territory; or
  - (bb) if  $\frac{P}{T}$  is less than or equal to 75%, then the royalty shall be the product of  $(1\% \times \frac{P}{T})$  of Net Sales by the authorised Licensees in such Licensed Territory; or
  - (cc) if there are no Cachexia Patents in such Licensed Territory, the royalty shall be 0% of Net Sales in such Licensed Territory.
- (ii) 2% (two per cent) of all Net Sales in any Financial Year during the Term exceeding an aggregate total Net Sales value of £500,000,000 (five hundred million pounds sterling) for such Financial Year.
- (d) Subject to clauses 5.2 and 8.2 below, Ark will make payments to Innovations in respect of Licence Receipts as follows:
  - (i) 5% (five per cent) of Licence Receipts during the Term up to and including an aggregate amount received by Ark or its Affiliates of £10,000,000 (ten million pounds sterling);
  - (ii) 1% (one per cent) of Licence Receipts during the Term in excess of an aggregate amount received by Ark or its Affiliates of £10,000,000 (ten million pounds sterling).

in both cases where such Licence Receipts are consideration for a licence or assignment under the Cachexia Patents and/or Know-How which is not a Freedom-to-Operate Licence; and

(iii) 30% (thirty per cent) of Licence Receipts from Licensees received by Ark or its Affiliates in consideration for the grant of Freedom-to-Operate Licences.

For the avoidance of doubt, Innovations shall not be entitled to receive payment under both clauses 5.1(d)(i) and (ii) on the one hand and 5.1(d)(iii) on the other.

- (e) Ark Group shall allot the Consideration Shares to Innovations and on the Commencement Date Ark Group shall deliver to Innovations:
  - (i) a share certificate in respect of the Consideration Shares duly executed and completed in favour of Innovations;
  - (ii) duly executed powers of attorney or other authorities under which the certificate for the Consideration Shares has been executed together with certified copies of:
    - (aa) the minutes recording the resolution of the board of directors of Ark Group authorising the allotment and issue of the Consideration Shares and the execution of the certificate for the Consideration Shares in respect of them;
    - (bb) the register of members of Ark Group showing Innovations as holder of the Consideration Shares;
    - (cc) duly executed consents of the holders of the A ordinary and B ordinary shares in Ark Group under the shareholders' agreement and articles of association of Ark Group to the issue of the Consideration Shares to Innovations; and
    - (dd) duly executed consents of any person or authority required in respect of the issue of the Consideration Shares to Innovations.
- 5.2 In relation to the calculation of royalty payments pursuant to clause 5.1 above, the following provisions shall apply:
  - (a) In the event that non-monetary consideration is received in respect of Licence Receipts, and
    - (i) such non-monetary consideration is readily realisable for monetary consideration, Ark shall realise such part of the consideration sufficient to pay an amount equal to the payments due hereunder in respect thereof less Ark's costs in realising such part of the consideration (such part of the consideration to be defined for the purposes of this clause as the "Relevant Proportion") to Innovations and shall pay the sum derived from realising the Relevant Proportion in accordance with clause 8 below; or
    - (ii) such non-monetary consideration is not readily realisable for monetary consideration, Ark shall:
      - (aa) if it is entitled to do so, transfer the Relevant Proportion to Innovations or, if it is not entitled to do so, hold the Relevant Proportion on trust for Innovations until such time as a transfer can be made or the Relevant Proportion realised into monetary terms whereupon it shall, at its discretion, either make the transfer to Innovations or realise the Relevant Proportion and pay the sum derived from realising the Relevant Proportion to

Innovations, in either case within 30 Business Days of such date; and

(bb) co-operate with Innovations to enable Innovations to realise the Relevant Proportion received in non-readily realisable form and shall use its reasonable endeavours to realise such consideration in a cost-effective and timely manner. Further, Ark will use its reasonable endeavours to avoid unnecessarily accepting any restrictions on the ability of Ark or Innovations to realise the Relevant Proportion.

In each case, if the Relevant Proportion is not agreed, it is to be determined by an independent auditor selected by Ark and accepted by Innovations, such acceptance not to be unreasonably withheld.

- (b) For the purposes of clauses 5.1(d)(i) and (ii) Licence Receipts shall not include any amounts received or invoiced in respect of Net Sales, for which the provisions of clauses 5.1(b) and (c) shall apply, nor any amounts received or invoiced in respect of Freedom-to-Operate Licences, for which the provisions of clause 5.1(d)(iii) shall apply.
- (c) With respect to the supply or transfer of any Products between Ark and any of its Affiliates or relevant Licensees, "Net Sales" shall be calculated based on the final sale or supply of such Products by Ark, its Affiliates or Licensees (as the case may be) to an independent third party.
- (d) Where any Products are used by or made available to any third parties by Ark or its Affiliates or relevant Licensees other than by outright sale at a bona fide arms-length price, in calculating "Net Sales" there shall be substituted for the invoiced or received amount an amount equal to the total amount invoiced or received by or on behalf of Ark or its Affiliates or relevant Licensees for an equivalent quantity of the Products sold or offered for sale at a bona fide arms-length price on the last occasion on which a sale or offer for sale of the Products occurred or, in the event that no sales of the Products at a bona fide arms-length price have occurred, the amount shall be the higher of the actual cost of manufacture plus 30% or the amount invoiced or received by Ark or its Affiliates or relevant Licensees to their customers for the sale or supply of the Products.
- If Ark or any of its Affiliates decide, or if Ark becomes aware that any of its Licensees has decided, not to pursue or continue research and development into, or the manufacture or sale of, any Product (either in total or in respect of a particular use, application or clinical indication), Ark will notify Innovations in writing of such decision within a reasonable time of making such a decision or becoming aware of it (as the case may be). If requested to do so by Innovations, Ark will consider the terms proposed by Innovations on which Innovations (including any collaboration partners) may (either alone or together with Ark) take over and pursue any such research, development, manufacture or sale.

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## 6 Duration

6.1 This Agreement will come into force on the Commencement Date and shall continue in force within each and every country in the Territory until the later of the period of 10 years from the first commercial sale of Product within each such country or until the date of expiry of the last to expire of the Cachexia Patents within each such country whereupon this Agreement shall terminate in such country of the Territory save for those terms which expressly or by their nature survive termination or expiry of this Agreement and without prejudice to the accrued rights of any party to this Agreement.

# 7 Exploitation of the Cachexia Patents

- 7.1 Ark undertakes to use all reasonable endeavours to promote the manufacture and sale of the Products in the Territory (other than the territories listed in Schedule 3 hereto) and to take all reasonable commercial steps to optimise the sale of the Products taking into account the nature of Ark's business, the nature of the technology covered by the Cachexia Patents and all other relevant circumstances at the time.
- 7.2 Ark shall provide within 60 Business Days of the date of this Agreement and at least annually thereafter to Innovations a written report summarising all current and projected activities taken or to be taken by Ark or its Licensees to promote the Products and to optimise their sales pursuant to the obligations set out in clause 7.1.
- Ark shall at the request of Innovations inform Innovations of whether an application for marketing authorisation or other regulatory approval in respect of the Products has been or is to be submitted to any relevant authorising body anywhere in the Territory provided that Ark is entitled to release such information (and for this purpose Ark shall use all reasonable endeavours to ensure that it is so entitled).
- 7.4 Ark shall inform Innovations whenever any such application for marketing authorisation or other regulatory approval is granted or rejected by the relevant authorising body thereby enabling the Products to be marketed or preventing the Products from being marketed in the jurisdiction in question provided that Ark is entitled to release such information (and for this purpose Ark shall use all reasonable endeavours to ensure that it is so entitled).

# 8 Accounting and Records and Payment

- 8.1 Royalties shall be payable in arrears:
  - (a) for those arising from sales of the Products by Ark or its Affiliates within 30 Business Days of each of the Accounting Dates in respect of all Net Sales arising in the immediately preceding Accounting Period; and
  - (b) for those arising from sales of the Products by Licensees within 45 Business Days of each of the Accounting Dates in respect of all Net Sales arising in the immediately preceding Accounting Period or within 15 Business Days after Ark has received the payment from the Licensee whichever is the later (Ark having used its reasonable endeavours to obtain such payment as soon as reasonably practicable following each of the Accounting Dates).

Ark shall be entitled to make deductions from Royalties payable under this Agreement in respect of bad debts.

- 8.2 Within 30 Business Days of each Accounting Date, Ark shall deliver to Innovations a statement in writing showing the Royalties payable for the immediately preceding Accounting Period and giving such particulars as are reasonably necessary to show how such Royalties (and any deductions therefrom) have been calculated. The parties agree that in the absence of evidence to the contrary the following assumptions in relation to the calculation of Royalties (and any deductions therefrom) shall apply:
  - if in any particular country in the Territory, the only approved clinical indication granted to Ark, its Affiliates or Licensees is for the use of the Active Ingredient in the Field, then all sales of Product incorporating the Active Ingredient in such country shall be deemed to be Net Sales (and therefore liable to Royalties under clause 5);
  - (b) if in any particular country in the Territory, the only approved indication granted to Ark, its Affiliates or Licensees is for the use of the Active Ingredient not in the Field, then all sales of Product incorporating the Active Ingredient in such country in the Territory shall be deemed not to be Net Sales (and therefore free from Royalties under clause 5);
  - if in any particular country in the Territory there are approved indications (c) granted to Ark, its Affiliates or Licensees for the Active Ingredient both in the Field and outside it, then Ark shall be entitled to rely on the data (in respect of use of the Active Ingredient both in the Field and outside it) provided by IMS (or similarly recognised data publishing organisation) in order to determine which sales of Product incorporating the Active Ingredient shall be liable to Royalties under clause 5. Where such data is not available within 30 days of the end of the Accounting Period. Ark may rely on the corresponding data for the immediately preceding Accounting Period. Subsequently, upon receipt of the data for the Accounting Period in question, Ark will notify Innovations and make a further payment or deduction (as the case may be) in accordance with clause 8.5. In the absence of data from IMS (or similarly recognised data publishing organisation) or if Ark reasonably believes such analysis will result in a materially misleading calculation, the parties will proceed on the basis of assumptions to be agreed by them at the time.

# 8.3 All consideration due under this Agreement:

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- (a) is exclusive of VAT which where applicable will be paid by Ark to Innovations in addition;
- (b) except for the Consideration Shares, shall be paid in pounds sterling (unless and until sterling is replaced by the Euro at which time payment shall be made in Euros at the then legislated Euro to pounds sterling conversation rate) either by cheque or in cash by transferring an amount in aggregate to the following account number 87777770, sort code 51-50-01, account name Imperial College Innovations Limited, held with National Westminster Bank Plc, 18 Cromwell Place, London SW7 2LB. In the case of income received by Ark in a currency other than pounds sterling, the Royalty shall be calculated in the other currency

and then converted into equivalent pounds sterling at the buying rate of such other currency as quoted by National Westminster Bank Plc in London as at the close of business on the last Business Day of the Accounting Period with respect to which the payment is made;

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- shall be paid without deduction of income tax or other taxes charges or duties that may be imposed, except insofar as Ark, its Affiliates or Licensees is required to deduct the same to comply with applicable laws. The parties shall cooperate and take all steps reasonably and lawfully available to them (short of commencing proceedings of any sort and without incurring substantial expense) to avoid deducting such taxes and to obtain double taxation relief. If Ark, its Affiliates or Licensees is required to make any such deduction Ark shall provide Innovations with such certificates or other documents as it can reasonably obtain to enable Innovations to obtain appropriate relief from double taxation of the payment in question; and
- (d) shall be paid by the due date, failing which Innovations may charge interest on any outstanding amount on a daily basis at a rate equivalent to three (3) per cent above the National Westminster Bank plc base lending rate then in force.
- 8.4 Innovations may from time to time by notice in writing require that Ark provide a certificate from an independent auditor verifying the statements delivered by Ark under clause 8.2 above, such certificates to be provided at Innovations' expense save in the case where an under-payment of Royalties of 5% or more is shown in which event such certificate shall be provided at the expense of Ark.
- In the event that either party discovers that an under or over payment of the Royalty has occurred they will promptly notify the other and the amount of any under payment will be paid with, or the amount of any over payment will be deducted from, the next payments of Royalty due under this Agreement. However, in the event of any such over or under payment being discovered following the final payment of Royalty due in respect of any country, Innovations shall return the excess or Ark shall make up the shortfall as the case may be within 90 days of expiry of the Agreement in the country in question.
- Ark shall at all times keep or cause or procure to be kept for at least six years accounts and supporting documentation of all Products produced and/or sold, used or disposed of by or on behalf of Ark, its Affiliates or Licensees and the Net Sales thereof in its possession custody or control containing such data as is reasonably required for the computation and verification of the Royalties and all other sums payable under this Agreement. In respect of sales data and other information relating to Products produced and/or sold, used or disposed of by Licensees, Ark shall use all reasonable endeavours:
  - (a) to ensure that it is entitled to obtain such documents from its Licensees; and
  - (b) to make disclosure to Innovations of all such data reasonably required for the computation and verification of Royalties and all other sums payable under this Agreement or, at Ark's sole discretion, to procure such disclosure to an independent auditor selected by Ark and acceptable to Innovations (which acceptance shall not be unreasonably withheld) for such purpose.

8.7 Ark shall give to or procure for such independent auditor every reasonable facility no more than once in any 12 month period during normal business hours to inspect all accounts, records and supporting documentation kept in accordance with clause 8.6 and to make copies or to take extracts from these accounts, records and supporting documentation. Such independent auditor shall be required by Innovations to keep any information thus received confidential and not to disclose to Innovations any Confidential Information relating to Ark, its Affiliates or Licensees but shall merely report on any under or over payment discovered as a result of his inspection.

# 9 Warranties and Indemnities

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- 9.1 Innovations represents and warrants to Ark and Ark Group that, as at 16 October 1998, it was the beneficial owner of the Confidential Data and Innovations and its Affiliates had the right, power and title to disclose it to Ark, that it has given no other person any permission to use any of it save as expressly permitted hereunder, that it is unaware of any use by any third party of the Confidential Data, that Ark was entitled to include it in International Patent Publication WO 99/20260 published on 29 April 1999, and that it has the right, power and title to enter into this Agreement, including the right to grant the licence under clause 2 above. For the avoidance of doubt, the publication of the Confidential Data or any part thereof in an academic journal after 16 October 1998 shall not be a breach of this clause 9.1 as regards the warranty relating to the use by a third party of the Confidential Data.
- 9.2 Ark shall indemnify Innovations and its Affiliates in full against all claims, actions, proceedings, penalties, costs (including reasonable legal costs), expenses, losses or damage whether direct, indirect, economic (including loss of profit and loss of business opportunity), or consequential, suffered by Innovations or its Affiliates arising out of any claim for breach of contract or misrepresentation by Tanabe or any tortious proceedings for personal injury or death resulting from Ark's and/or its Affiliates development, manufacture, import, use and/or sale of Products, brought against Innovations or its Affiliates by a third party ("Claims") except insofar as the Claims arise from any material breach by Innovations of its warranty under clause 9.1 (as regards any claim by Tanabe) or arise from any invalidity or defect in the Confidential Data (as regards Ark and/or its Affiliates' activities) and provided that Innovations and its Affiliates:
  - (a) give notice to Ark of any such Claims forthwith upon becoming aware of the same;
  - (b) give Ark the sole conduct of the defence to any such Claims and do not at any time admit liability or otherwise settle or compromise or attempt to settle or compromise such Claims except upon the express instructions of Ark;
  - (c) act in accordance with the reasonable instructions of Ark and give Ark (at Ark's expense) such assistance as it shall reasonably require in respect of the conduct of the said defence including without prejudice to the generality of the foregoing, the filing of all pleadings and other court process and the provision of all relevant documents; and
  - (d) mitigate any losses or damages in respect of such Claims in accordance with their common law duty to do so.

- 9.3 Ark represents and warrants that:
  - (a) it has the right, title and power to enter into this Agreement;
  - (b) its product known as EG006 comprises a salt form of Imidapril;
  - (c) Schedule 2 comprises a complete list of all patents and patent applications which claim priority from the Superseded Patents or any of them; and
  - (d) save for those patents and patent applications listed in Schedule 2, there are at the Commencement Date no patents or patent applications owned by Ark or its Affiliates which include any claims relating to the Active Ingredient in the Field.

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- 9.4 Ark Group represents and warrants to Innovations that:
  - (a) it has the right, title and power to enter into this Agreement;
  - (b) it has sufficient authorised and unissued Ordinary Shares (as defined in the articles of association of Ark Group) of 0.02 pence each from which to allot and issue Consideration Shares to Innovations and that it has obtained all necessary authorities and consents for the issue of the Consideration Shares to Innovations;
  - (c) the articles of association and shareholders' agreement of Ark Group as at the Commencement Date are set out in Schedule 4;
  - (d) save for any amendments required to enable an initial public offering of the shares of Ark Group ("IPO"), including (i) the termination of the shareholders' agreement, (ii) the removal of all classes of shares other than Ordinary Shares; and (iii) the replacement of the articles of association with standard public company articles, each on the occurrence of an IPO, it has not entered nor proposes to enter into any agreement which might change the rights of any shareholders of Ark Group or which change the rights attaching to any class of shares from those set out in the articles of association and shareholders' agreement set out in Schedule 4;
  - (e) the shareholders and shareholdings and options granted in respect of shares in Ark Group as at the Commencement Date are set out in Schedule 5; and
  - (f) it is the full legal and beneficial owner of all of the issued shares in Ark and it has not issued any shares nor granted any options for shares of Ark Group or Ark to be issued, allotted or acquired to or by any third party other than those disclosed in Schedule 5 hereto.

## 10 Further Assurance

10.1 Ark Group shall execute or, so far as is within its power, procure that any relevant third party shall execute all such documents and/or do or, so far as each is able, procure the doing of such acts and things as Innovations shall after the Commencement Date reasonably require in order to give effect to this Agreement and any documents entered into pursuant to it (in particular without limitation the

allotment and issue of the Consideration Shares to Innovations) and to give to Innovations the full benefit of all the provisions of this Agreement.

# 11 Grant and Maintenance of the Cachexia Patents

- 11.1 Ark shall, taking into account the nature of the technology covered by the Cachexia Patents, the nature of Ark's business and all other relevant circumstances prevailing at the time:
  - (a) diligently prosecute the patent applications within the Cachexia Patents to obtain the grant of patent protection for the Cachexia Patents in those territories in which applications have been made; and
  - (b) maintain the Cachexia Patents once granted in force in those territories in which Ark has obtained patent protection;

in each case insofar as Ark considers in its sole discretion commercially expedient to do so.

- 11.2 In the event that Ark decides to abandon or cease to maintain any of the Cachexia Patents or pending applications therefor, it shall give Innovations notice of at least 20 Business Days of its intention to do so, and Innovations may, within such period, request that Ark assign such patents or applications to Innovations. Ark shall consider such request and shall notify Innovations of its decision in relation thereto, indicating (if appropriate) the terms upon which Ark may be prepared to make any such assignment.
- 11.3 If at any time during this Agreement Innovations or any of its Affiliates shall (otherwise than as a result of being compelled to do so by the order of a court or other tribunal having the power to do so) directly or indirectly oppose or assist any third party to oppose the grant of a patent on any patent application within the Cachexia Patents or disputes or directly or indirectly assists any third party to dispute the validity of any patent within the Cachexia Patents, or any of the claims thereof, Ark shall be entitled forthwith immediately to terminate its obligations under this Agreement to Innovations by notice to Innovations and if Ark does so terminate, Innovations shall likewise be released from all its obligations under this Agreement, save in respect of each party, those set out in clauses 13 and 16.3.

# 12 Infringement of the Cachexia Patents

- 12.1 Innovations shall give notice in writing to Ark of any infringement or threatened or potential infringement of the Cachexia Patents or any other acts of which Innovations is aware or reasonably suspects might constitute an infringement of the Cachexia Patents (or any claim by a third party that the Products infringe their rights) promptly upon any such matter coming to Innovations' attention from time to time.
- 12.2 Ark shall decide in its absolute discretion whether and what steps should be taken to prevent or terminate any infringement of the Cachexia Patents whether such steps are threatened, potential or actual including whether proceedings should be instituted, continued or defended, and nothing in this Agreement shall oblige Ark to take any such action.

12.3 If Ark decides not to take any action to prevent or terminate any infringement of any of the Cachexia Patents or to defend any proceedings relating to the Cachexia Patents, it will notify Innovations accordingly giving reasonably detailed reasons for its decision not to take any such action.

# 13 Confidentiality

- Information belonging to or licensed to the other party disclosed or obtained as a result of the relationship of the parties under or in the process of negotiating this Agreement and shall not use or disclose the same save as allowed by this Agreement, without the prior written consent of the other party. Where disclosure is made to any employee, consultant, sub-contractor agent or expert, it shall be done subject to obligations equivalent to those set out in this Agreement and each party agrees to ensure that if the other party so requests prior to such disclosure such employee, consultant, sub-contractor, agent or expert, enters into a deed of covenant with the other party in a form reasonably acceptable to that other party containing obligations equivalent to those set out in this clause 13. Each party shall procure that any such employee, consultant, contractor, agent or expert complies with such obligations. Each party shall be responsible to the other party in respect of any disclosure or use of such Confidential Information by a person to whom disclosure is made.
- 13.2 The obligations of confidentiality in this clause 13 shall not extend to the Confidential Data or to any matter which either party can show:
  - (a) is in, or has become part of, the public domain other than as a result of a breach of the obligations of confidentiality under this Agreement; or
  - (b) was in its written records prior to the Commencement Date; or
  - (c) was independently disclosed to it by a third party entitled to disclose the same; or
  - (d) is required to be disclosed under any applicable law or regulations including any stock exchange listing requirements, or by order of a court, governmental or regulatory body or authority of competent jurisdiction.
- 13.3 No party may publish or cause or permit to be published any statement or representation in any form whatsoever (including contributing in any way to any general publicity) in relation to this Agreement save any statements which the parties have previously approved in writing. In particular, Innovations shall use reasonable endeavours to ensure that neither Patricia Latter, Professor Andrew Coats nor Dr Stefan Anker shall make or publish any such statement or representation without the prior written approval of Ark. Save for the discussion between Ark and Jonathan Gee, for this purpose Innovations warrants that to the best of its knowledge and belief, these three individuals are the only ex-employees of Innovations or its Affiliates who have knowledge of this Agreement.
- 13.4 The parties shall inform all their employees and agents or those of their Affiliates (together with, in the case of Ark and Ark Group, all their ex-employees and ex-agents who have knowledge of the matters in dispute or of the fact of the settlement in clause

16.3 and, in the case of Innovations, those ex-employees of Innovations or its Affiliates who will receive a financial benefit as a result of the implementation of this Agreement), who have knowledge of the matters in dispute or of the fact of the settlement in clause 16.3, of the confidential nature of this agreement and shall use their reasonable endeavours to require them not to make any claims, allegations, actions or proceedings in respect of the settlement in clause 16.3 or the matters which are the subject of such settlement.

### 14 Force Majeure

- 14.1 If any party is affected by Force Majeure it shall immediately notify the other party in writing of the matters constituting the Force Majeure and shall keep that party fully informed of their continuance and of any relevant change of circumstances whilst such Force Majeure continues.
- 14.2 The party affected by Force Majeure shall take all reasonable steps available to it to minimise the effects of Force Majeure on the performance of its obligations under this Agreement.
- 14.3 Force Majeure shall not entitle either party to terminate this Agreement and neither party shall be in breach of this Agreement, or otherwise liable to the other, by reason of any delay in performance, or non-performance of any of its obligations due to Force Majeure.

#### 15 Assignment and Rights of Third Parties

- 15.1 Except as provided in this clause 15 none of the parties shall assign, delegate, subcontract, transfer, charge or otherwise dispose of all or any of their rights and responsibilities under this Agreement except with the prior written consent of the other parties which shall not be unreasonably withheld.
- Affiliate or to any person to whom it transfers the relevant part of its business. On any such assignment Ark shall, and shall procure that its assignee shall, and Innovations shall, execute an agreement novating all or the relevant part of this Agreement so as to give effect to any such assignment and so as to bind Innovations and the assignee to all the provisions in this Agreement or in the relevant part of this Agreement, such that Ark and Ark Group will be released from all its obligations under this or the relevant part of this Agreement from the date of such novation (other than those in clauses 13 and 16.3 and, in the case of Ark Group, those obligations in clause 5.1(e) to the extent not performed at such date).
- 15.3 Innovations may assign all of its rights and obligations under this Agreement to any Affiliate.
- 15.4 In the event that Innovations shall have entered into any assignment pursuant to clause 15.3, Innovations shall execute, and shall procure that its assignee executes, and Ark and Ark Group shall execute, an agreement novating this Agreement so as to give effect to such assignment and so as to bind Ark, Ark Group and the assignee to all the provisions contained in this Agreement, such that Innovations will be released from all its obligations under this Agreement from the date of such novation save for those set

out in clauses 13 and 16.3 and provided that Innovations shall have also assigned to its Affiliate all its rights in the Confidential Data. In the event that Innovations shall have entered into any such assignment or novation, upon any transaction or event whereby such assignee ceases to be an Affiliate of Innovations or Imperial, the Agreement shall terminate.

- 15.5 No person who is not a party to this Agreement (including any employee, officer, agent, representative or subcontractor of either party) shall have the right (whether under the Contracts (Rights of Third Parties) Act 1999 or otherwise) to enforce any term of this Agreement which expressly or by implication confers a benefit on that person without the express prior agreement in writing of the parties which agreement must refer to this clause.
- 15.6 In the event that Ark proposes to assign the Cachexia Patents to any third party it shall notify such third party of the existence of this Agreement and, in the event that Ark assigns the Cachexia Patents, it shall notify Innovations accordingly. Save for assignment under clause 15.2, assignment of the Cachexia Patents by Ark shall not release Ark from its obligations under this Agreement, including those set out in clause 5.1.

#### 16 General

- 16.1 None of the parties shall represent itself as being one of the other parties, nor an agent, partner, employee or representative of the other parties and none of the parties shall hold itself out as such nor as having any power or authority to incur any obligation of any nature, express or implied on behalf of the other party and nothing in this Agreement shall create, or be deemed to create, a partnership or joint venture or relationship of employer and employee or principal and agent between the parties.
- 16.2 This Agreement and the confidentiality disclosure agreement entered into by the parties dated 20 November 2003 contain the entire agreement between the parties in relation to its subject matter. Each of the parties irrevocably and unconditionally waives any right it may have to claim damages for, and/or to rescind this Agreement because of, breach of any warranty not contained in this Agreement, or any misrepresentation whether or not contained in this Agreement, unless such misrepresentation was made fraudulently. Further, and for the avoidance of doubt, the parties agree that any agreement made or alleged to be made between Ark and Innovations in relation to the Confidential Data or the Cachexia Patents prior to the Commencement Date either was never formed or has now terminated and that any rights in respect thereof which may have accrued due to either party have been irrevocably waived pursuant to clause 16.3 below.
- 16.3 This Agreement shall immediately be fully and effectively binding on the parties by way of a complete and final satisfaction and settlement of all claims or allegations that any party may have against any other party whatsoever in relation to the Confidential Data, the Cachexia Patents or the terms of any agreement in relation to the Confidential Data or the Cachexia Patents made or alleged to have been made between Ark and Innovations prior to the Commencement Date, either now or in the future (including without limitation those made in the Letter), whether currently known or unknown to the parties, and whether or not presently known to law save for the purpose of enforcing this Agreement, or in respect of any fraud or fraudulent

misrepresentation discovered after the entering into of this Agreement. Accordingly, no party shall pursue any such claims or allegations, or any actions or proceedings based thereon and shall irrevocably waive all their rights and interests in relation to any such claims, allegations, actions or proceedings and in relation to the terms of any agreement made or alleged to have been made between Ark and Innovations in relation to the Confidential Data or the Cachexia Patents prior to the Commencement Date.

- 16.4 No purported alteration or variation of this Agreement shall be effective unless it is in writing, refers specifically to this Agreement and is duly executed by each of the parties to this Agreement.
- 16.5 The rights and remedies of either party in respect of this Agreement shall not be diminished, waived or extinguished by the granting of any indulgence, forbearance or extension of time by one party to the other nor by any failure of, or delay by a party in ascertaining or exercising any such rights or remedies. The waiver by either party of any breach of this Agreement shall not prevent the subsequent enforcement of that provision and shall not be deemed to be a waiver of any subsequent breach of that or any other provision.
- 16.6 If any part of this Agreement (including any one or more of the clauses of this Agreement or any sub-clause or paragraph or any part of one or more of these clauses) is held to be or becomes void or otherwise unenforceable for any reason under any applicable law, the same shall be deemed omitted from this Agreement and the validity and/or enforceability of the remaining provisions of this Agreement shall not in any way be affected or impaired as a result of that omission.
- 16.7 This Agreement may be entered into in the form of three counterparts, each executed by one of the parties, and, provided that the parties shall so enter into the Agreement, each of the executed counterparts shall be deemed to be an original but, taken together, they shall constitute one instrument.
- 16.8 Each of the parties shall, and shall use their reasonable endeavours to procure that any necessary third parties shall, execute and deliver to the other party such other instruments and documents and take such other action as is necessary to fulfil the provisions of this Agreement in accordance with its terms.

#### 17 Notices

17.1 Any notices or demands sent under this Agreement must be in writing and may be served by personal delivery or by sending the notice or demand by post or facsimile transmission to the following company officer at the following address:

Innovations:

The Managing Director

Imperial College Innovations Ltd

Electrical and Electronic Engineering Building

Imperial College London

Exhibition Road, London SW7 2AZ

Ark and Ark Group:

The Chief Executive Officer Ark Therapeutics Group Ltd

#### 1 Fitzroy Mews, London W1T 6DE

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or at such other address as the relevant party may give for the purpose of service of notices or demands under this Agreement and every such notice or demand shall be deemed to have been served upon delivery if served by hand or at the expiration of 5 Business Days after despatch of the same if delivered by post or at 10 o'clock a.m. local time of the recipient on the next Business Day following despatch if sent by facsimile transmission.

17.2 To prove service of any notice or demand it shall be sufficient to show in the case of a notice or demand delivered by hand that the same was duly addressed and delivered by hand and in the case of a notice or demand served by post that the same was duly addressed prepaid and posted in the manner set out above. In the case of a notice or demand given by facsimile transmission, it shall be sufficient to show that it was despatched in a legible and complete form to the correct telephone number without any error message provided that a confirmation copy of the transmission is sent to the recipient by post in the manner set out above. Failure to send a confirmation copy will invalidate the services of any facsimile transmission.

#### 18 Dispute Resolution Procedure

- 18.1 All disputes may be resolved by either party calling a meeting of the parties by service of not less than 15 Business Days' written notice and each party agrees to procure that an authorised representative shall attend all meetings called in accordance with this clause 18.1.
- 18.2 Those attending the relevant meeting shall use all reasonable endeavours to resolve disputes arising out of this Agreement. If the meeting fails to resolve the disputes within 15 Business Days of its being referred to it, either party by notice in writing may refer the dispute to the Chair of the Board of Directors of the parties, who shall co-operate in good faith to resolve the dispute as amicably as possible within 30 Business Days of the dispute being referred to them.
- 18.3 If the Chairpersons fail to resolve the disputes in the allotted time, one party may within that period send a written request to the other parties ("ADR Request") to enter into an alternative dispute resolution procedure ("ADR Procedure") with the assistance of a mediator agreed by the parties. The parties shall thereafter submit to such ADR Procedure. If the parties are unable to agree on the identity of the mediator within 15 Business Days of the date of the ADR Request, the mediator will be appointed at the request of either party by the Centre for Dispute Resolution, Prince's House, 95 Gresham Street, London EC2V 7NA.
- 18.4 The parties shall then submit to the supervision of the Centre for Dispute Resolution for the exchange of relevant information and for setting the date for negotiations to begin.
- 18.5 Any settlement which the parties reach shall be reduced to writing and, once signed by a duly authorised representative of each of the parties, shall be and remain binding on the parties.
- 18.6 The parties shall bear their own legal costs of the ADR Procedure, but the costs and

expenses of mediation shall be borne by the parties equally.

18.7 Any disputes not resolved by the Chairpersons in accordance with clause 18.2, or by reference to ADR pursuant to clause 18.3, may then be referred by either party to the courts in accordance with clause 20 below.

#### 19 Law

19.1 This Agreement shall be governed by, and construed in accordance with, the laws of England.

#### 20 Jurisdiction

20.1 Subject to clause 18 above, all disputes arising out of or relating to this Agreement shall be subject to the non-exclusive jurisdiction of the English Courts to which the parties irrevocably submit.

IN WITNESS OF THE ABOVE the parties have executed this Agreement as a Deed and delivered it on the date written at the head of this Agreement.

### SIGNED as a DEED on behalf of

## IMPERIAL COLLEGE INNOVATIONS LIMITED

By duly authorised directors and/or secretary:
signed
MuMuu signed
Signed R.I. Warrest (print name of signatory)
SIGNED as a DEED on behalf of
ARK THERAPEUTICS LIMITED
By duly authorised directors and/or secretary:  signed
(print name of signatory) NINZ R. PARKER  Mh) What signed
M.JW!LLAMS (print name of signatory)
SIGNED as a DEED on behalf of
ARK THERAPEUTICS GROUP LIMITED
By duly authorised directors and/or secretary:  signed
Peter S. Keew (print name of signatory)  Mh signed
M.D.WILLIAMS (print name of signatory)

#### APPENDIX 5

Resolutions from extraordinary general meeting on January 16, 2004

No. 4313987

# ARK THERAPEUTICS GROUP LIMITED Special Resolution

At an extraordinary general meeting of the Company held at 1 Fitzroy Mews, London W1T 6DE on 16 January 2004 at 11.00 a.m. the following resolutions were passed, of which resolutions 1 and 2 were passed as ordinary resolutions and resolutions 3 and 4 were passed as special resolutions.

#### ORDINARY RESOLUTIONS

- 1. That the issued share capital of the Company be increased by the issue of 175,000 ordinary shares, and the creation and issue (by way of reclassification of 1,500,000 existing authorised but unissued ordinary shares) of 1,250,000 'C' Ordinary Shares (the "A Management Shares") and 250,000 'D' ordinary shares (the "B Management Shares") each having the rights and being subject to the restrictions and obligations set out in the articles of association to be adopted pursuant to paragraph 4 below.
- 2. That the Directors are generally and unconditionally authorised for the purposes of section 80 of the Companies Act 1985 (the "Act") to:
- offer, allot, grant options over or grant any right or rights to subscribe for a maximum aggregate nominal amount of £250 of A Management Shares and £50 of B Management Shares to such persons, at such times, for such consideration and upon such terms and conditions as the Directors may determine; and
- allot a maximum aggregate nominal amount of £35 of Ordinary Shares to Imperial College Innovations Limited ("Innovations") pursuant to the terms of an agreement to be entered into between Innovations, the Company and Ark Therapeutics Limited.

#### SPECIAL RESOLUTIONS

- 3. That the Articles of Association of the Company be amended by deleting the existing articles of association and replacing them with new articles of association in terms of the attached document initialled by the chairman for the purposes of identification only.
- 4. That the provisions set out in article 8.6 of the Articles of Association shall not apply in relation to the issue of A Management Shares or B Management Shares or to the issue of ordinary shares pursuant to resolution 2 above.

Dated: 27 February 2004

Martyn Williams

Secretary

A55 COMPANIES HOUSE

02/03/04

#### **APPENDIX 6**

Annual return on Form 363a regarding change of members, dated November 27, 2003



## Companies House

— for the record — Company Name

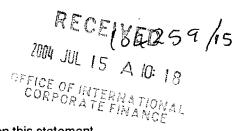
ARK THERAPEUTICS GROUP LIMITED

Company Type
Private Company Limited By
Shares
Company Number
4313987
Information extracted from

Companies House records on

4th October 2003

363s Annual Return



- > Please check the details printed in blue on this statement.
- > If any details are wrong, strike them through and write the correct details in the "Amended details" column.
- > Please use black pen and write in capitals.

Section 1: Company details

A25 COMPANIES HOUSE	0491 27/11/08

Ref: 4313987/09/28	Current details	Amended details
Registered Office Address If any of the details are wrong, strike them through and fill in the correct details in the "Amended details" column.	1 Fitzroy Mews London W1T 6DE	Address  UK Postcode
Register of Members If any of the details are wrong, strike them through and fill in the correct details in the "Amended details" column.	Address where the Register is held  At Registered Office	
> Register of Debenture Holders If any of the details are wrong, strike them through and fill in the correct details in the "Amended details" column.	Not Applicable	Address  UK Postcode
> Principal Business Activities If any of the details are wrong, strike them through and fill in the correct details in the "Amended details" column.	SIC Code Description  7310 R & D on nat sciences & engineering	SIC CODE Description
Please enter additional principal activity code(s) in "Amended details" column. See notes for guidance for list of activity codes.		

Company Number - 4313987

Section 2: Details of Officers of the Company

		Current details	Amended details
•	Company Secretary If any of the details for this person are wrong, strike	Name Martyn Douglas WILLIAMS	Name
	them through and fill in the correct details in the "Amended details" column.	Address 1 Fitzroy Mews London W1T 6DE	Tick this box if this address is a service address for the beneficiary of a Confidentiality Order granted under section 723 of the Companies Act 1985.  Address
	Particulars of a new		
	Company Secretary must be notified on form 288.		UK Postcode
		:	Date of change / /
			Date Martyn Douglas WILLIAMS ceased to be secretary (if applicable)
•	Director If any of the details for this	Name Peter Stephen KEEN	Name
		Address 1 Fitzroy Mews London W1T 6DE	Tick this box if this address is a service address for the beneficiary of a Confidentiality Order granted under section 723 of the Companies Act 1985.
	i de la companya de La companya de la co	Alternation of the state of the	Address
		The state of the s	
		Date of birth 27/08/1957	<u> </u>
		Nationality British	UK Postcode
	Particulars of a new Director		Date of birth//
	must be notified on form	Occupation Chartered Accountant	Nationality
	288.	!	Occupation
			Date of change / /
			Date Peter Stephen KEEN ceased to be director (if applicable)

Company Number - 4313987		Section 2: Details of Officers of the Company (continued)		
		Current details	Amended details	
>	Director  If any of the details for this person are wrong, strike them through and fill in the	Name Dr Kalevi KURKIJARVI	Name	
	correct details in the "Amended details" column.	Address 1 Fitzroy Mews London W1T 6DE	Tick this box if this address is a service address for the beneficiary of a Confidentiality Order granted under section 723B of the Companies Act 1985.	
			Address	
		Date of birth 13/03/1952		
	Particulars of a new Director	Nationality British	UK Postcode	
	must be notified on form 288.	Occupation Chairman & Ceo	Nationality	
			Date of change / /	
		:	Date Dr Kalevi KURKIJARVI ceased to be director (if applicable)	
_	Director	Name	Name 1 - 1 1	
¥	If any of the details for this person are wrong, strike them through and fill in the correct details in the "Amended details" column.	Professor John Francis MARTIN	See as ma and	
Company of the		Address 1 Fitzroy Mews	Tick this box if this address is a service address for the beneficiary of a	
)# (5)			Confidentiality Order granted under section 723B of the Companies Act 1985.	
			Address	
		Date of birth 08/07/1943		
	Service of a service Size of	Nationality British	UK Postcode	
	Particulars of a new Director must be notified on form	Occupation Professor Of Medicine		
	288.		Occupation	
			Date of change / /	
			Date Professor John Francis MARTIN ceased to be director (if applicable)	
			/ /	

Company Number - 4313987		Section 2: Details of Officers of the Company (continued)		
_		Current details	Amended details	
>	Director If any of the details for this person are wrong, strike them through and fill in the correct details in the "Amended details" column.	Name Dennis Michael John TURNER  Address 1 Fitzroy Mews London W1T 6DE	Tick this box if this address is a service address for the beneficiary of a Confidentiality Order granted under section 723B of the Companies Act 1985.	
			Address	
		Date of birth 04/10/1942		
	Particulars of a new Director	Nationality Canadian	UK Postcode	
	must be notified on form 288.	Occupation Company Director	Nationality	
			Occupation	
			Date of change / /  Date Dennis Michael John TURNER  ceased to be director (if applicable)	
	Director  If any of the details for this person are wrong, strike them through and fill in the correct details in the "Amended details" column.	Name Martyn Douglas WILLIAMS  Address 1 Fitzroy Mews London W1T 6DE	Tick this box if this address is a service address for the beneficiary of a Confidentiality Order granted under section 723B of the Companies Act 1985.	
			Address	
		Date of birth 05/05/1951		
	Particulars of a new Director	Nationality British	UK Postcode LLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLL	
	must be notified on form	Occupation Company Director	Nationality	
	<i>288.</i>		Occupation	
			Date of change / /	
			Date Martyn Douglas WILLIAMS ceased to be director (if applicable)	
			//	

	ompany Number - 4313987	Section 2: Details of Officers of the Comp Current details	Amended details
•	Director If any of the details for this person are wrong, strike	Name Professor Seppo YLA HERTTUALA	Name
	them through and fill in the correct details in the "Amended details" column.	Address 1 Fitzroy Mews London W1T 6DE	Tick this box if this address is a service address for the beneficiary of a Confidentiality Order granted under section 723B of the Companies Act 1985.  Address
	Particulars of a new Director must be notified on form	Date of birth 05/01/1957  Nationality Finland  Occupation Professor	UK Postcode Date of birth / / Nationality
	288.		Occupation
			Date of change / /
			Date Professor Seppo YLA HERTTUALA ceased to be director (if applicable)

.

### Section 4: Details of New Shareholders and Transfers (A) (ii)

- > Please fill in details of any persons or corporate bodies who have become shareholders since the last annual return.
- > Please fill in details of any persons or corporate bodies that have transferred shares since the last annual return.
- > Please use Section 4B to give details of any persons or corporate bodies who have ceased to be shareholders since the last annual return or, in the case of a first return, since the incorporation of the company.
- > Please copy this page if there is not enough space to enter all the company's current shareholders.

Shareholders details	Class and number of shares or amount of stock held	Class and number of shares or amount of stock transferred (If appropriate)		
Name MERLINGENERAL PARTNER LID (AS GENERAL PARTNER OF THE MERLIN EUND LP)  Address  LA MOTTEC HAMPERS  LA MOTTE ST., ST. HELLER,  DERSEY, CHANNEL ISLANDS  UK POSTCODE JEI-LBJ  Name MERLIN EQUITY LTD  Address  12 St. DAMES SQUARE  LONDON  UK POSTCODE SW14 ABP		143,299 ORDINARY SHARES 31,492 ORDINARY SHARES	15/10/02	
Name PROF. JOHN MARTIN Address I FITZROY MEW) WIT 6DE UK Postcode WII 6DE		8,734 ORDINARY SHARES 34,000 ORDINARY SHARES	15/10/02	
Name  MR. STEPHEN BARKER  Address  LEITLROY MEWS  LONDON  UK Postcode WII & DE		7,506 Ordinaro Share)		

#### Section 4: Details of New Shareholders and Transfers (A) (ii)

- > Please fill in details of any persons or corporate bodies who have become shareholders since the last annual return.
- > Please fill in details of any persons or corporate bodies that have transferred shares since the last annual return.
- > Please use Section 4B to give details of any persons or corporate bodies who have ceased to be shareholders since the last annual return or, in the case of a first return, since the incorporation of the company.
- > Please copy this page if there is not enough space to enter all the company's current shareholders.

Shareholders details	Class and number of shares or amount of stock held	Class and number of shares or amount of stock transferred (If appropriate)	registration
Name  KARI AIRENNE  Address  GRAPALKEN EENTIE 10B  40520 DYRASKYLA  FINLAND  UK Postcode  Name  ZIGGUS HOLDINGS  Address  EAST CROWNDALE FARM  BROOK LANE  TAUISTOCK		SHARES	15/10/02
Name PANU SANDMAIR  Address ACHSTRASSE 4A  86316 FRIEDDERG  CERMANY  UK Postcode		273 ORDINARY SHARES	15/10/02
Name PAUL HIGHAM Address I FITZROY MEW) LONDON  UK Postcode WII 6 D E		10,000 Ordinary SHARES	23/12/02

Company Number - 4313987

## Section 4: Details of New Shareholders and Transfers (A) (ii)

- > Please fill in details of any persons or corporate bodies who have become shareholders since the last annual return.
- > Please fill in details of any persons or corporate bodies that have transferred shares since the last annual return.
- > Please use Section 4B to give details of any persons or corporate bodies who have ceased to be shareholders since the last annual return or, in the case of a first return, since the incorporation of the company.
- > Please copy this page if there is not enough space to enter all the company's current shareholders.

Shareholders details	Class and number of shares or amount of stock held	Class and number of shares or amount of stock transferred (If appropriate)	
Name  MARIUN WILLIAMS  Address  I FITZROY MENS  LONDON		10,000 ORDINARY SHARES	23/12/02
Name  Acan Boyo  Address  Firing Men  London  UK Postcode  WII_6PE		4,000 ORDINARA SHARES	23/12/02
Name  SIMON BRADBURY  Address  IFITZROY MEW)  LONDON  UK Postcode WIFL & DE		2,000 ORDINARY SHARES	23/12/02
Name Address UK Postcode			

### Section 4B: Details of Former Shareholders

- > Please fill in details of any persons or corporate bodies who have ceased to be shareholders at the date of this return. Also, please give the dates that their shares were transferred.
- > Please copy this page if there is not enough space to enter all the company's former shareholders.

Former shareholders details	Class and number of shares or amount of stock transferred	Date of registration of transfer
Name HANNU POUTIAINEN  Address SNELLMANIKATU 32A3 70100 KUOPIO FINLAND UK Postcode	ORDINARY SHARES	15/10/02
Name MERLIN GENERAL PARTNER LTD (AS GENERAL PARTNER OF THE MERLIN FUND LP)  Address  LA MOTTE CHAMDERS  LA MOTTE STREET, ST. HULIER,  DERSEY, CHANNEL ISLANDS	- 60,000 ORDINARY SHARES	23/12/02
UK Postcode		Array No. 1
UK Postcode		
Name Address	-	
UK Postcode Name		
Address		
UK Postcode		

Company Number - 4313987



#### 363s Annual Return Declaration

- When you have checked all the sections of this form, please complete this page and sign the declaration below.
- If you want to change the made up date of this annual return, please complete 2 below.

#### Declaration

I confirm that the details in this annual return are correct as at the made-up-date
(shown at 2 below). I enclose the filing fee of £15.

Signature

Date 26 , 11 , 2003

This date must not be earlier than the return date at 2 below

#### What to do now

Complete this page then send the whole of the Annual Return and the declaration to the address shown at 4 below.

#### 2. Date of this return

This AR is made up to 31/10/2003

If you are making this return up to an earlier date, please give the date here

\_\_/ \_\_ / \_\_ \_

Note: The form must be delivered to CH within 28 days of this date

#### 3. Date of next return

If you wish to change your next return to a date earlier than 31st October 2004 please give the new date here:

#### 4. Where to send this form

Please return this form to:

Registrar of Companies Companies House Crown Way Cardiff CF14 3UZ

OR:

For members of the Hays Document Exchange service DX 33050 Cardiff

1,1

Have you enclosed the filing fee with the company number written on the reverse of the cheque?

#### **Contact Address**

You do not have to give any contact information below, but if you do, it will help Companies House to contact you if there is a query on the form. The contact information that you give will be visible to searchers of the public record.

Contact Name

Telephone number inc code

020\_\_ 73914069

SIMON DRADBURS Address

FISLROY MEWS ONDON

DX number if applicable

-----DX exchange

WIT GDE

Postcode

#### **APPENDIX 7**

Notice of increase in nominal capital on Form 123, dated March 24, 2004

#### COMPANIES FORM No. 123

## Notice of increase in nominal capital

CHFP025

write in this margin

Pursuant to section 123 of the Companies Act 1985 Please do not To the Registrar of Companies For official use Company number (Address overleaf) Please complete 4313987 legibly, preferably in black type, or Name of company bold block lettering ARK Therapeutics Group PLE \* insert full name of company gives notice in accordance with section 123 of the above Act that by resolution of the company dated 24 February 2004 \_ the nominal capital of the company has been increased by £ 1,000,300 \_\_\_ beyond the registered capital of £ 999,700 the copy must be printed or in some A copy of the resolution authorising the increase is attached. † other form approved The conditions (eg. voting rights, dividend rights, winding-up rights etc.) subject to which the new by the registrar shares have been or are to be issued are as follows: The application that the common time is not The new shares comprise 100,030,000 Ordinary Shares of 1 pence each having the rights and being subject to the restrictions set out in the articles of association of the Company adopted by special resolution dated 24 February Please tick here if continued overleaf ‡ Insert Director, Secretary, Administrator. Designation ‡ Signed Administrative Receiver or Receiver (Scotland) as appropriate Presentor's name address and For official Use Post room reference (if any): General Section Ashurst Broadwalk House 5 Appold Street London EC2A 2HA COMPANIES HOUSE DPA/3344224

Laserform International 12/99

#### **APPENDIX 9**

#### **Appointments and Terminations of Directors**

- (a) Appointment of director on Form 288a, dated May 26, 2004.
- (b) Terminating appointment as director on Form 288b, dated April 19, 2004.
- (c) Appointment of director on Form 288a, dated April 19, 2004.
- (d) Terminating appointment as director on Form 288b, dated March 24, 2004.
- (e) Terminating appointment as director on Form 288b, dated March 24, 2004.
- (f) Appointment of director on Form 288a, dated February 3, 2004.
- (g) Terminating appointment as director on Form 288b, dated July 16, 2003.



Please complete in typescript, or in bold black capitals.

CHWP000

RECEIVED 2004 JUL 15 A 10: 13

288a

APPOINTMENT of director or secretary (NOT for resignation (use Form 288b) or change of particulars (use Form 288c))

Company Number	4313987
Company Name in full	Ark Therapeutics Group plc
Data of	Day Month Year Day Month Year
Date of appointment	12 6 10 6 12 0 0 11 12 12 110 6 11 0 6 11
Appointment Appointment as director	as secretary    Please mark the appropriate box. If appointment is as a director and secretary mark both boxes.   Please mark the appropriate box. If appointment is as a director and secretary mark both boxes.   Please mark the appropriate box. If appointment is as a director and secretary mark both boxes.   Please mark the appropriate box. If appointment is as a director and secretary mark both boxes.   Please mark the appropriate box. If appointment is as a director and secretary mark both boxes.   Please mark the appropriate box. If appointment is as a director and secretary mark both boxes.   Please mark the appropriate box. If appointment is as a director and secretary mark both boxes.   Please mark the appropriate box. If appointment is as a director and secretary mark both boxes.   Please mark the appropriate box. If appointment is as a director and secretary mark both boxes.   Please mark the appropriate box. If appointment is as a director and secretary mark both boxes.   Please mark the appropriate box.   Please mark the appropriate bo
form NAME *Style / Title	Mr *Honours etc
Notes on completion appear on reverse. Forename(s)	David Norman
Surname	Prince
Previous An apply the participation of Forename(s)	Previous Surname(s) Surname(s)
th Tick this box if the diddress shown is a service address for	The Pound, Northend, Batheaston
the beneficiary of a Annual Post town Confidentiality Order	Bath Postcode BA1 8EW 28 0 0 5 5 20 5 5
granted under the provisions of section County / Region 7238 of the	Country UK
Companies Act 1985  TNationality	British †Business occupation Consultant
†Other directorships (additional space overleaf)	
Consent signature	Date 26 MAY 2004.
* Voluntary details. † Directors only.	A director, secretary etc must sign the form below.
**Delete as appropriate Signed	Nf.C.Phimmer. Date 26 MAY 2009
You do not have to give any contact	(**a director/ secretary / administrator/ administrative receiver / receiver manager / receiver)
information in the box opposite but if you do, it will help Companies House to	Nick Plummer
contact you if there is a query on the	1 Fitzroy Mews, London W1T 6DE
form. The contact information that you give will be visible to searchers of the	Tel 020 7319 4084
public "	DX number DX exchange
ge	When you have completed and signed the form please send it to the Registrar of Companies at:  Companies House, Crown Way, Cardiff, CF14 3UZ DX 33050 Cardiff
COMPANIES HOUSE 01/06/04	for companies registered in England and Wales or Companies House, 37 Castle Terrace, Edinburgh, EH1 2EB
Form April 2002	for companies registered in Scotland DX 235 Edinburgh or LP - 4 Edinburgh 2

· ` `	Company Number	4313987
† Directors only.	†Other directorships	

Subject As 12 de 1

Show the full forenames, NOT INITIALS. If the director or secretary is a corporation or Scottish firm, show the name on surname line and registered or principal office on the usual residential line.

Give previous forenames or surname(s) except:

- for a married woman, the name by which she was known before marriage need not be given.
- for names not used since the age of 18 or for at least 20 years

A peer or individual known by a title may state the title instead of or in addition to the forenames and surname and need not give the name by which that person was known before he or she adopted the title or succeeded to it.

#### Other directorships.

Give the name of every company incorporated in Great Britain of which the person concerned is a director or has been a director at any time in the past five years.

You may exclude a company which either is, or at all times during the past five years when the person concerned was a director, was Sans when the person concerned was a director

T - dormant

- a parent company which wholly owned the company making the return, or
   another wholly owned subsidiary of the same parent company.



Please complete in typescript, or in bold black capitals.
CHWP000

Company Number

# 288b

Terminating appointment as director or secretary (NOT for appointment (use Form 288a) or change of particulars (use Form 288c))

4313987

Company Name in full

ARK THERAPEUTICS GROUP PLC

Date of te	rmination o	of appointment as director	Day Month Year  I 9 0 4 2 0 0 4  as secretary Please mark the appropriate box, If terminating appointment as a director and secretary mark both boxes.
	NAME	*Style / Title	MR *Honours etc
Please insert details as	, î <u>.</u>	Forename(s)	MARTYN DOUGLAS
previously notified to	. 19 . 19	Sumame	WILLIAMS
Companies House	e.		Day Month Year
		†Date of Birth	015 015 1-191511

A serving director, secretary etc must sign the form below.

Companies House, 37 Castle Terrace, Edinburgh, EH1 2EB

DX 235 Edinburgh or LP - 4 Edinburgh

* Voluntary details. † Directors only. ** Delete as appropriate	Date 19/04/2004  (** serving director / secretary / administrator / administrator / administrator / administrator /
You do not have to give any contact information in the box opposite but if you do, it will help Companies House to contact you if there is a	NICK PLUMMER  1 FITZROY MEWS LONDON WIT 6DE
query on the form. The contact information that you give will be visible to searchers of the public	Tel 020 7388 7722
record.	When you have completed and signed the form please send it to the Registrar of Companies at:  Companies House, Crown Way, Cardiff, CF14 3UZ DX 33050 Cardiff for companies registered in England and Wales

for companies registered in Scotland

Form revised 10/03

A15 COMPANIES HOUSE

20/04/04

# \_ form

COMPANIES HOUSE

20/04/04

# 288a

DX 235 Edinburgh

APPOINTMENT of director or secretary (NOT for resignation (use Form 288b) or Please complete in typescript, change of particulars (use Form 288c)) or in bold black capitals. CHFP010. Company Number 43 13987 Company Name in full THERA PEUTICS GROUP Day Month Year Day Month Year **Appointment** Date of † Date of 214 210101 0.4 110 917 appointment form Please mark the appropriate box. If appointment is as a director and secretary mark both boxes. Notes on completion Appointment as director as secretary appear on next page. NAME \* Style / Title Honours etc MR Forename(s) NICHOLAS Surname PLUMMER **Previous Previous** forename(s) surname(s) Usual residential FITZ ROY MEWS address Postcode W1T Post town MOCHO e de County / Region Country † Business † Nationality BRITISH SOLICITOR occupation † Other directorships NONE (additional space next page) I consent to act as \*\* director / secretary of the above named company Consent signature Date lummer -.004 \* Voluntary details. A director, secretary etc must sign the form below. † Directors only. \*\* Please delete as appropriate Date Signed (\*\*a director Fee Please give the name, address, telephone NICK PLUMMER number and, if available, a DX number and Exchange of the person Companies House LONDON WLT 6DE should contact if there is any query. 7722 7388 020 DX number DX exchange When you have completed and signed the form please send it to the Registrar of Companies at: Companies House, Crown Way, Cardiff, CF14 3UZ DX 33050 Cardiff

for companies registered in England and Wales

for companies registered in Scotland

Companies House, 37 Castle Terrace, Edinburgh, EH1 2EB

•	Company Number	4313987	
† Directors only.	† Other directorships		

#### NOTES

Show the full forenames, NOT INITIALS. If the director or secretary is a corporation or Scottish firm, show the name on surname line and registered or principal office on the usual residential line.

Give previous forenames or surname(s) except:

- for a married woman, the name by which she was known before marriage need not be given.
- for names not used since the age of 18 or for at least 20 years.

A peer or individual known by a title may state the title instead of or in addition to the forenames and surname and need not give the name by which that person was known before he or she adopted the title or succeeded to it.

#### Other directorships.

[本] 网络三额株园石 鐵矿瓦蘭等電源 动物 [4] Give the name of every company incorporated in Great Britain of which the person concerned is a director or has been a director at any time in the past five years.

You may exclude a company which either is, or at all times during the past five years when the person concerned was a director, was

1.012

- dormant
- a parent company which wholly owned the company making the return, or
  - another wholly owned subsidiary of the same parent company.



288b Package: 'Laserform' by Laserform International Ltd. Terminating appointment as director or secretary Please complete in typescript, (NOT for appointment (use Form 288a) or change or in bold black capitals. of particulars (use Form 288c)) CHFP025 Company Number 4313987 Company Name in full Ark Therapeutics plc Day Month Year Date of termination of appointment 3 Please mark the appropriate box. If terminating as director as secretary appointment as a director and secretary mark both boxes. NAME \*Style / Title \*Honours etc Professor Please insert details as Forename(s) John Francis previously notified to Sumame Martin Companies House. Day Month Year †Date of Birth 1.00 A serving director, secretary etc must sign the form below. Voluntary details. Signed Date t Directors only. \*Please delete as appropriate (\*\* serving director ocretary/administrator/administrative receiver/receiver manager/receives) Please give the name, address, Ashurst telephone number and, if available, Broadwalk House, 5 Appold Street, London, EC2A 2HA a DX number and Exchange of DPA/3344468 the person Companies House should contact if there is any query. Tel 020 7638 1111 DX exchange London/City DX number 639 When you have completed and signed the form please send it to the Registrar of Companies at: Companies House, Crown Way, Cardiff, CF14 3UZ DX 33050 Cardiff for companies registered in England and Wales 0602 Companies House, 37 Castle Terrace, Edinburgh, EH1 2EB COMPANIES HOUSE 26/03/04 for companies registered in Scotland DX 235 Edinburgh Laserform International 02/00

Package: 'Laserform' by Laserform International Ltd. Terminating appointment as director or secretary Please complete in typescript, (NOT for appointment (use Form 288a) or change or in bold black capitals. of particulars (use Form 288c)) CHFP025 Company Number 4313987 Company Name in full Ark Therapeutics Group plc Day Year Month Date of termination of appointment 0 Please mark the appropriate box. If terminating as director as secretary appointment as a director and secretary mark both boxes NAME \*Style / Title \*Honours etc Please insert details as Forename(s) Kalevi previously notified to Surname Kurkijärvi Companies House. Day Month Year †Date of Birth A serving director, secretary etc must sign the form below. \* Voluntary details. Signed Date † Directors only.
\*\*Please delete as appropriate (\*\* serving director secretary/administrator/administrative receiver/receiver manager/receiver) Please give the name, address, telephone number and, if available, Broadwalk House, 5 Appold Street, London, EC2A 2HA a DX number and Exchange of DPA\3344255 the person Companies House should contact if there is any query. Tel 020 7638 1111 DX number 639 DX exchange London/City When you have completed and signed the form please send it to the Registrar of Companies at: Companies House, Crown Way, Cardiff, CF14 3UZ DX 33050 Cardiff for companies registered in England and Wales COMPANIES HOUSE Companies House, 37 Castle Terrace, Edinburgh, EH1 2EB 26/03/04 for companies registered in Scotland DX 235 Edinburgh Laserform International 02/00



Please complete in typescript, or in bold black capitals.

CHWP000

# 288a

APPOINTMENT of director or secretary (NOT for resignation (use Form 288b) or change of particulars (use Form 288c))

011001 000		. , , , , , , , , , , , , , , , , , , ,
	Company Number	4313987
Con	npany Name in full	ARK THERAPEUTICS GROUP LTD
	Date of	Day Month Year Day Month Year
	appointment	0 9 1 1 2 0 0 3 Birth 1 5 0 9 1 9 5 1
	Appointment as director	Please mark the eppropriate box. If appointment is as a director and secretary mark both boxes.
	NAME *Style / Title	DR. *Honours etc
Notes on completion appear on reverse.	Forename(s)	WOLFGANG
	Surname	PLISCHKE
ann e din en e	Previous Forename(s)	Previous Surname(s)
<sup>††</sup> Tick this box if the address shown is a service address for	†† Usual residential address	1 FITZROY MEWS
the beneficiary of a Confidentiality Order granted under the	Post town	LONDON Postcode W1T 6DE
provisions of section 723B of the	County Region	LONDON Country UK
Companies Act 1985	†Nationality	XGERMAN TBusiness occupation President Pharma-
†Other directorships		see attachment bayer Heathlan
(au	Iditional space overleaf)  Consent signature	I consent to act as ** director / secretary of the above named company
* Voluntary details.	••••••••••••••••••••••••••••••••••••••	X Date 3.2.04
† Directors only. **Delete as appropriate		A director, secretary etc must sign the form below.
	Signed	Mh Majas Date 3.2.04
	to give any contact	(**a director / secretary / administrator / administrative receiver / receiver manager / receiver)
	ox opposite but if you ompanies House to	
contact you if the	re is a query on the	
	information that you to searchers of the	Tel
public record	_	DX number DX exchange
	-	When you have completed and signed the form please send it to the Registrar of Companies at:
	10	Companies House, Crown Way, Cardiff, CF14 3UZ DX 33050 Cardiff for companies registered in England and Wales or
COMPANIES HOU		Companies House, 37 Castle Terrace, Edinburgh, EH1 2EB for companies registered in Scotland DX 235 Edinburgh

	Company Number	
† Directors only,	†Other directorships	

Show the full forenames, NOT INITIALS. If the director or secretary is a corporation or Scottish firm, show the name on surname line and registered or principal office on the usual residential line.

Give previous forenames or surname(s) except:

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- for names not used since the age of 18 or for at least 20 years

A peer or individual known by a title may state the title instead of or in addition to the forenames and surname and need not give the name by which that person was known before he or she adopted the title or succeeded to it.

#### Other directorships.

Give the name of every company incorporated in Great Britain of which the person concerned is a director or has been a director at any time in the past five years.

You may exclude a company which either is, or at all times during the past five years when the person concerned was a director, was

- dormant
- dormant
   a parent company which wholly owned the company making the return, or - a parent company which wholly owned the company making the return, or - another wholly owned subsidiary of the same parent company.



#### Companies House

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Please complete in typescript, or in bold black capitals. CHWP000

Terminating appointment as director or secretary (NOT for appointment (use Form 288a) or change of particulars (use Form 288c))

288b

**Company Number** 

Company Name in full

ARK THERAPEUTICS GROUP LTD

Date of term	nination	of appointment	Day	Month	Year 2.0.0	2					
		as director		<u> </u>	as secreta	2) ry [	í		nt as a din	ropriate bo ector and s	
•	NAME	*Style / Title	DR	, ,			*Hone	ours etc			 
Please insert details as		Forename(s)	GE	OFFK	ŒΥ						
previously notified to		Surname	VEI	RNON	V						
Companies House.		†Date of Birth	Day ()	Month 0 3	Year 1 0 5	2			,	:	

A serving director, secretary etc must sign the form below.

	Signed
ntary details,	g

\* Volur

Form revised 1999

Date

(\*\* serving director / secretary Lad

Please give the name, address, telephone number and, if available, a DX number and Exchange of the person Companies House should contact if there is any query.

Th. 18/07/03 COMPANIES HOUSE

K THERAPEUTICS LD, I FITZROY MENU, DX exchange

When you have completed and signed the form please send it to the legistrar of Companies at:

ompanies House, Crown Way, Cardiff, CF14 3UZ DX 33050 Cardiff r companies registered in England and Wales

Companies House, 37 Castle Terrace, Edinburgh, EH1 2EB

for companies registered in Scotland

DX 235 Edinburgh

<sup>†</sup> Directors only.
\*\* Delete as appropriate

#### **APPENDIX 10**

#### Returns of Allotment of Shares on Form 88(2):

- (a) Return of Allotment of Shares, dated May 17, 2004.
- (b) Return of Allotment of Shares, dated May 10, 2004.
- (c) Return of Allotment of Shares, dated April 23, 2004.
- (d) Return of Allotment of Shares, dated April 13, 2004.
- (e) Return of Allotment of Shares, dated March 24, 2004.
- (f) Return of Allotment of Shares, dated March 3, 2004.
- (g) Return of Allotment of Shares, dated March 2, 2004.



for the necond Please complete in typescript, or

in bold black capitals. CHWP000

4242087

Company Number	4313987						
Company name in full	ARK THERAPEUTICS GROUP PLC						
Shares allotted (including bor	nus shares):						
` •	From	То					
Date or period during which shares were allotted	Day Month Year	Day Month Year					
(If shares were allotted on one date enter that date in the "from" box)	0 4 0 5 2 0 0 4						
Class of shares (ordinary or preference etc)	ORDINARY ORDINARY	ORDINARY					
Number allotted	25000 25000	10000					
Nominal value of each share	£0.01	£0.01					
Amount (if any) paid or due on each share (including any share premium)	h 30p 50p	69p & a					
List the names and addresses of the	e allottees and the number of shares allotte	ed to each overleaf					
If the allotted shares are fully	or partly paid up otherwise than in o	cash please state:					
% that each share is to be treated as paid up							
Consideration for which the shares were allotted (This information must be supported by the duly stamped contract or by the duly stamped particulars on Form 88(3) if the contract is not in writing)							
	When you have completed and s the Registrar of Companies at:	signed the form send it to					

A28 COMPANIES HOUSE 0208 18/05/04

Companies House, Crown Way, Cardiff CF14 3UZ For companies registered in England and Wales

DX 33050 Cardiff

RECEIVE 88(2)

MINING STREET OF A 10: A 10

Companies House, 37 Castle Terrace, Edinburgh EH1 2EB For companies registered in Scotland

DX 235 Edinburgh

Shareholder details	Shares and share class allotte	
Name PERSHING KEEN NOMINEES LIMITED	Class of shares allotted	Number allotted
Address PARTICIPANT ID 601 MEMBER ACCOUNT LDCLT	ORDINARY	60,000
CAPSTAN HSE, ONE CLOVE CRESCENT, EAST INDIA DOCK, LONDON	l	
UK Postcode _E _1 _4 2 _B _H	L	
Name	Class of shares allotted	Number allotted
Address		
UK Postcode	1	
Name	Class of shares allotted	Number allotted
Address		
UK Postcode		<u> </u>
Name	Class of shares allotted	Number allotted
Address		
UK Postcode L L L L L L		
Name	Class of shares allotted	Number allotted
Address		
UK Postcode	<u></u>	L
Please enter the number of continuation sheets (if any) attached to this fo	orm	
A director / secretary / administrator / administrative receiver / receiver manager / receiver		delete as appropriate
lease give the name, address, lephone number and, if available,		
DX number and Exchange of the		
erson Companies House should ontact if there is any query.	Tel	1



88(2)

Return of Allotment of Shares

Please complete in typescript, or in bold black capitals. CHWP000

**Company Number** 

4313987

ARK THERAPEUTICS GROUP PLC	

Company name in full	ARK THERAPEUTICS GROUP PLC		
Shares allotted (including bo	nus shares):		
	From <sup>*</sup>	То	
Date or period during which shares were allotted	Day Month Year	Day Month Year	
(If shares were allotted on one date enter that date in the "from" box)	0 4 0 5 2 0 0 4		
Class of shares (ordinary or preference etc)	ORDINARY		
Number allotted	25000	*** ***	
Nominal value of each share	£0.01	in the second se	
Amount (if any) paid or due on each share (including any share premium)	ch 30p	770 E63V	
List the names and addresses of the	ne allottees and the number of shares allotte	ed to each overleaf	
If the allotted shares are fully	or partly paid up otherwise than in o	cash please state:	
% that each share is to be treated as paid up			
Consideration for which the shares were allotted			
(This information must be supported by the duly stamped contract or by the duly stamped particulars on Form 88(3) if the			
contract is not in writing)			
	When you have completed and s	signed the form send it to	

the Registrar of Companies at:

A39 COMPANIES HOUSE 0679 18/05/04 Companies House, Crown Way, Cardiff CF14 3UZ

DX 33050 Cardiff

For companies registered in England and Wales

**DX 235** Edinburgh

Companies House, 37 Castle Terrace, Edinburgh EH1 2EB For companies registered in Scotland

Shareholder details	Shares and share c	lass allotte
Name JORGE ERUSALIMSKY	Class of shares allotted	Number allotted
Address 97 ABBOTS GARDENS,	ORDINARY	25,000
EAST FINCHLEY, LONDON		L
UK Postcode N2 C D J J	L	
Name	Class of shares allotted	Number allotted
Address		
		L
UK Postcode	<u> </u>	<b>L</b>
Name	Class of shares allotted	Number allotted
Address		
		<u> </u>
UK Postcode		<u> </u>
Name	Class of shares	Number allotted
Address		<u> </u>
UK Postcode		<u> </u>
Name	Class of shares allotted	Number allotted
Address	_	
	L	<u> </u>
UK Postcode LLLLL		
Please enter the number of continuation sheets (if any) attached to the	nis form	
Signed NR. Columner	Date 10/05/2004	
A director / secretary / administrator / administrative receiver / receiver manager / re	receiver / ( Please de	lete as appropria

person Companies House should contact if there is any query.

NICK PLUMMER	
I FITZROY MEWS	LONDON WIT LOE
	Tel 020 7388 7722
DX number	DX exchange



Return of Allotment of Shares

in bold black capitals. CHWP000			
Company Number	4313987		
Company name in full	ARK THERAPEUTICS GROUP PLC		
Shares allotted (including bo	nus shares):		
	From	To	
Date or period during which	Day Month Year	Day Month Year	
shares were allotted (If shares were allotted on one date enter that date in the "from" box)	0,60,42,0,0,4		
Class of shares (ordinary or preference etc)	ORDINARY		
Number allotted	25000		
Nominal value of each share	£0.01p	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
Amount (if any) paid or due on each share (including any share premium)	ch 30p		
List the names and addresses of th	ne allottees and the number of shares allot	tted to each overleaf	
If the allotted shares are fully	or partly paid up otherwise than in	cash please state:	
% that each share is to be treated as paid up			
Consideration for which the shares were allotted (This information must be supported by the duly stamped contract or by the duly stamped particulars on Form 88(3) if the contract is not in writing)			

the Registrar of Companies at:

A09 COMPANIES HOUSE 0266 30/04/04

Companies House, Crown Way, Cardiff CF14 3UZ For companies registered in England and Wales

DX 33050 Cardiff

DX 235 Edinburgh

Companies House, 37 Castle Terrace, Edinburgh EH1 2EB For companies registered in Scotland

Shareholder de	etails	Shares and share	class allotted
Name DAVID SELWOOD		Class of shares allotted	Number allotted
Address 50 FORDWICH ROAD, WELWYN GARD	EN CITY,	ORDINARY	25,000
HERTS			<b></b>
UK Pos	tcode AL8, 6,EY	1	<u> </u>
Name		Class of shares allotted	Number allotted
Address			
			L
UK Post	code LLLLLL	<u></u>	<del></del>
Name		Class of shares allotted	Number allotted
Address			(
The second secon		*	
UK Post	code LLLLL		
Name : 1		Class of shares allotted	
Address	A -		
			<u> </u>
UK Post	code LLLLLL	L	<u></u>
Name		Class of shares aflotted	Number allotted
Address			j
<u> </u>			L
L	·		<b>L</b>
UK Post	code LLLLLL		L
Please enter the number of continuati	on sheets (if any) attached to this	form	
signed N.C. Alumerer	Da	te 23/04/04	
A director/ secretary Ladministrator Ladmin		, ,	elete as appropriate
Please give the name, address, elephone number and, if available,	NICK PLUMMER		
DX number and Exchange of the person Companies House should	ARK THENCAPEUTICS GR	OUP PLC 1 FITT	ekoy Mows
contact if there is any query.	CANDDAY WATER	Tel and a	300 7770

DX number

DX exchange

Package: ' 'Laserform' by Laserform International Ltd. Return of Allotment of Shares Please complete in typescript, or in bold black capitals. CHFP025 4313987 Company Number Company name in full Ark Therapeutics Group Plc Shares allotted (including bonus shares): From To Date or period during which Day Year Dav Month Year Month shares were allotted (If shares were allotted on one date 8 3 2 0 0 0 0 0 3 enter that date in the "from" box) Class of shares Ordinary (ordinary or preference etc) Number allotted 41,413,996 Nominal value of each share 1 Pence Amount (if any) paid or due on each 133 Pence share (including any share premium) List the names and addresses of the allottees and the number of shares allotted to each overleaf If the allotted shares are fully or partly paid up otherwise than in cash please state: % that each share is to be treated as paid up Consideration for which the shares were allotted (This information must be supported by the duly stamped contract or by the duly stamped particulars on Form 88(3) if the contract is not in writing) When you have completed and signed the form please send it to the Registrar of Companies at: Companies House, Crown Way, Cardiff, CF14 3UZ DX 33050 Cardiff For companies registered in England and Wales Companies House, 37 Castle Terrace, Edinburgh, EH1 2EB DAAR For companies registered in Scotland DX 235 Edinburgh COMPANIES HOUSE 3353901

Name Kari Juhani Airenne	<del></del>	Shares and share class allotted	
Kari Juhani Airenne	Class of shares	Number	
	allotted	allotted	
Address			
Varvisaarentie 8 As 1, 70100 Kuopio, Finland	Ordinary	526	
	_		
UK Postcode	<u> </u>		
Name	Class of shares allotted	Number allotted	
Credie Suisse First Boston Equities Nominees Limited 7 Acct	- anotted	anotted	
Address			
1 Cabot Square, London	Ordinary	41,392,065	
UK Postcode _E _I _44 _Q _J			
Name	Class of shares	Number	
Miss Essi Maria Hannele Haklin	allotted	allotted	
Address			
Lippukatu 5 B 9, 70820 Kuopio, Finland	Ordinary	,150	
		1	
UK Postcode	٧.		
Name	Class of shares	Number	
Mrs Annukka Huttunen	allotted	allotted	
Address		; 	
Kivenkulmantie 3 C 13, 70780 Kuopio, Finland	Ordinary	<u>(150 ()</u>	
UK Postcode			
Name	Class of shares	Number	
Mrs Mervi Hannele Huttunen	allotted	allotted	
Address			
Neulamaentie 18 B 13, 70150 Kuopio, Finland	Ordinary	225	
UK Postcode	<u> </u>		

Package: 'Laserform' by Laserform International Ltd.	Return of Allotment of Shares
Please complete in typescript, or in bold black capitals.  CHFP025	Form 88(2) continuation sheet no:
Company Number	4313987
Company name in full	Ark Therapeutics Group Plc

Shareholder details	Shares and share c	lass allotted
Name  Mrs Maiju Kaarina Jaaskelainen	Class of shares allotted	Number allotted
Address  Ahkiotie 6 A 31, 70200 Kuopio, Finland	Ordinary	.299
UK Postcode		<u> </u>
Name  Mikko Juhani Karjalainen  Address  Samoilijantie 3 D 26, 70200 Kuopi, Finland	Class of shares allotted	်း မှ မြူများမြူတာ မြို့သည်
UK Postcode		L
Name  Olli Heikki Laitinen  Address	Class of shares allotted	Number allotted
Sarkiniementie 11 D 33, 70700 Kuopio, Finland	Ordinary	375
UK Postcode		L
Name  Dr Gillian Ann Langford  Address	Class of shares allotted	Number allotted
45 Thorton Road, Girton, Cambridge	Ordinary	751
UK Postcode CB3 0NP		L

Shareholder details	Shares and share c	ass allotted
Name	Class of shares	Number
Ms Mila Maarika Lind	allotted	allotted
Address		
Hauenkoukku 16 F 25, 70700 Kuopio, Finland	Ordinary	2,255
UK Postcode		
Name	Class of shares allotted	Number allotted
Mrs Niina Maarit Luoranen	anotteu	anotteo
Address		
Sarkilahdenkatu 1 A 10, 70700 Kuopio, Finland	_Ordinary	300
L	<u> </u>	
UK Postcode		L
Name	Class of shares	Number
Anssi Juhani Mahonen	allotted	allotted
Address		ļ
Pahkakuja 7 B 10, 70150 Kuopio, Finland	Ordinary	300
	<u></u>	L
UK Postcode	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	
Name 98	Class of shares	Number
uMar Mary Murray	allotted	allotted
Address	h , t a · ·	
The Stables, Balsams Close, Hertford	(Ordinary	7,518
	\ <del></del>	
UK Postcode <u>s G 1 3 8 B W</u>		
Name	Class of shares allotted	Number allotted
Ms Claire Newton	anotted	anotted
Address		
148 Crosslet Vale, Greenwich, London	Ordinary	375
		L
UK Postcode S E 1 0 8 D L	<u> </u>	
Name	Class of shares	Number
Mrs Minna Kristiina Nokelainen Address	allotted	allotted
Radiomastontie 5 D 21, 90230 Oulu, Finland	Ordinary	371
UK Postcode	<u> </u>	

Signed Mh Wins Des	signation Director	Date 13.4.04
		3353901

Package: 1 'Laserform' by Laserform International Ltd.

Please complete in typescript, or in bold black capitals.

CHFP025

### **Company Number**

Company name in full

Return	of	Allo	tment	of	Sh	ares
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Form 88(2) continuation sheet no:	2
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4313987		
Ark Therapeutics Group Plc		

Shareholder details	Shares and share class allotted	
Name	Class of shares allotted	Number allotted
Mrs Lutfat Rahaman		unonou
Address		
U38 Canterbury Road, Harrow, Middlesex	Ordinary	375
UK Postcode H A 1 , 4 P B		
Name  Mrs Eva Kristiina Rasanen	Class of shares allotted	Number allotted
Address	ी <i>म</i> क्षेत्र विद्या	
Heinaahontie 9, 70870 Hiltulanlahti, Finland	Ordinary	<u>145 mori — .</u>
UK Postcode	L	L
Name	Class of shares allotted	Number allotted
Jani Kristian Raty	anonou	anotica
Petkelkuja 3 D 13, 70150 Kuopio, Finland	Ordinary	L1.127
L		L
UK Postcode LLLLL	<u> </u>	
Name	Class of shares	Number
Timo Antero Ristola	allotted	allotted
Address		
Joukahaisenkatu 9, 80260 Joensuu, Finland	_Ordinary	12,255
UK Postcode		<u> </u>

Shareholder details	Shares and share cl	Shares and share class allotted		
Name	Class of shares	Number		
Miss Mari Annika Supinen	allotted	allotted		
Address				
Nuotiokuja 4 B 5, 70820 Kuopio, Finland	Ordinary	150		
UK Postcode		L		
Name	Class of shares	Number		
Antti Kalevi Sutinen	allotted	allotted		
Address				
Kuukusenkuja 1 AS 3, 70800 Kuopio, Finland	Ordinary	150		
		<u> </u>		
UK Postcode	<u> </u>	L		
Name	Class of shares	Number		
Mrs Jane Elizabeth Williams	allotted	allotted		
Address				
The Round House, Riding Lane, Hildenborough, Tonbridge, Kent	Ordinary	3,759		
	1			
UK Postcode <u>T N L L 9 Q L</u>		I		
Name **	Class of shares	Number allotted		
Address Address				
	L			
	L			
UK Postcode	L			
Name	Class of shares allotted	Number allotted		
Address				
	L			
UK Postcode				
Name	Class of shares allotted	Number allotted		
Address				
<u> </u>				
UK Postcode				
	<u> </u>			

Signed MhJUlaine Desi	gnation lirector	Date 13-4.04
		2252522

'Laserform' Package: by Laserform International Ltd. Return of Allotment of Shares Please complete in typescript, or in bold black capitals. CHFP025 4313987 Company Number Company name in full ARK THERAPEUTICS GROUP PLC Shares allotted (including bonus shares): To From Date or period during which Day Day Month Month Year Year shares were allotted (if shares were allotted on one date 0 3 3 0 enter that date in the "from" box) Class of shares **ORDINARY** ORDINARY (ordinary or preference etc) Number allotted 4,033,898,899 3,350,304 0.02 pence Nominal value of each share i pence Amount (if any) paid or due on each 300 share (including any share premium) List the names and addresses of the allottees and the number of shares allotted to each overleaf If the allotted shares are fully or partly paid up otherwise than in cash please state: % that each share is to be treated as paid up Consideration for which

> When you have completed and signed the form please send it to the Registrar of Companies at:

310

Companies House, Crown Way, Cardiff, CF14 3UZ DX 33050 Cardiff For companies registered in England and Wales

Companies House, 37 Castle Terrace, Edinburgh, EH1 2EB For companies registered in Scotland DX 235 Edinburgh 3344055



the shares were allotted (This information must be supported by the duly stamped contract or by the duly stamped particulars on Form 88(3) if the

contract is not in writing)

Shareholder det	Shares and share	class allotted	
Name  MERLIN GENERAL PARTNER II LTD (M  Address	erlin Biosciences Fund LP)	Class of shares allotted	Number allotted
La Motte Chambers, La Motte Street, St Helie	er, Jersey, Channel Islands	ORDINARY (0.02Pence)	293,191
UK Pos	tcode J E l _ l B J		L
Name  MERLIN GENERAL PARTNER II LTD (M.  Address	erlin Biosciences Fund GBR)	Class of shares allotted	Number allotted
La Motte Chambers, La Motte Street, St Helie	er, Jersey, Channel Islands	ORDINARY (0.02 Pence)	17,620
UK Pos	tcode J E l _ l B J		
Name NOMURA INTERNATIONAL PLC Address		Class of shares allotted	Number allotted
Nomura House, 1 St Martin's-Le-Grand, Lond	don EC1A 4NP	CRDINARY (0.02 Pence)	310,811
UK Pos	tcode	<u> </u>	
Name TVM IV GmbH & Co KG	etik ja Se japon sala Se japon sala	Class of shares allotted	Number allotted
Address  Eingang C, Maximillian Strasse 35, 805 39, N	Aunich, Germany	ORDINARY (0.02 Pence)	124,324
UK Post	tcode		L
Name  BIONEX INVESTMENTS PLC  Address		Class of shares allotted	Number allotted
223a Kensington High Street, London W8 6S	G	ORDINARY (0.02 Pence)	24,865
UK Pos	tcode	L	
Please enter the number of continuation	n sheets (if any) attached to this form	21, 2 04	
A director / ecretary / administrator / admin	Istrative receiver / receiver manager / receiv	rerA Please del	ete as appropriate
Please give the name, address, telephone number and, if available, a DX number and Exchange of the	London, EC2A 2HA		
person Companies House should contact if there is any query.	DPA/3344055 Tel 020 7638 1111		
Laserform International 02/00	DX number 639 DX exchange London/City 3344055		

Pa	ckage:	'Laserform'
by	Laserform	International Ltd.

Please complete in typescript, or in bold black capitals.

CHFP025

**Company Number** 

Company name in full

Return	of A	Allotm	ent o	f Shar	6
1 VOLUITA	<b>U</b> 17	11100111	<b>-111 -</b>	CHAI	-

Form 88(2) continuation sheet no:	1

ARK THERAPEUTICS GROUP PLC	THERAPEUTICS GROUP PLC

# Names and addresses of the allottees (List joint share allotments consecutively)

4313987

Shareholder details	Shares and share class allotted
Name	Class of shares Number
BIO FUND VENTURES II Ky	allotted allotted
Address	
Mikonkatu 4, 3rd Floor, P.O. Box 164, FIN-00101 Helsinki, Finland	LORDINARY (0.02 Pence) (248,649
UK Postcode	
Name Control of the C	Class of shares Number allotted allotted
CONCORDIA INVESTOR I K	allotted allotted
Address	
Mikonkatu 1B, FIN-00100, Helsinki, Finland	ORDINARY (0.02 Pence) 103,603
UK Postcode	<u> </u>
Name	Class of shares Number
BANKINVEST	allotted allotted
Address	
Sundkrogsgade 7, P O Box 2672, DK-2100 Kobenhayn Q, Denmark	LORDINARY (0.02 Pence) 1310,811
L	
UK Postcode	L
Name	Class of shares Number
PENSMAN NOMINEES LIMITED	allotted allotted
Address	
Gartmore House, 8 Fenchurch Place, London	LORDINARY (0.02 Pence) 1248,649
UK Postcode E C 3 M 4 P H	

Shareholder details Shares and share clas		lass allotted
Name	Class of shares	Number
NORTHERN INVESTORS COMPANY PLC Address	allotted	allotted
Northumberland House, Princess Square, Newcastle-upon-Tyne	LORDINARY (0.02 Pence)	62,162
UK Postcode W E 1 _ 8 E R		<b>L</b>
Name	Class of shares allotted	Number allotted
HEINRICH SCHULTE	allotted	anotted
Address		
d Fitzroy Mews, London	LORDINARY (0.02 Pence)	12,433
	<u> </u>	<u> </u>
UK Postcode W 1 T 6 D E		<u> </u>
Name	Class of shares allotted	Number allotted
DENNIS TURNER	allotted	anotted
Address		
1 Fitzroy Mews, London	LORDINARY (0.02 Pence)	7,460
· · · · · · · · · · · · · · · · · · ·	· L	<u> </u>
UK Postcode W. L. T. 6 D E	<u> </u>	<u> </u>
Name	Class of shares	Number allotted
MARTYN WILLIAMS		1
Address you gay with the life to the first to the		
1 Fitzroy Mews, London	LORDINARY (0.02 Pence)	1,865
UK Postcode W 1 T 6 D E		
Name	Class of shares	Number allotted
ALAN BOYD		
Address		
ıl Fitzroy Mews, London	LORDINARY (0.02 Pence)	1,243
UK Postcode WITL 6 DE		L
Name	Class of shares	Number
PAUL HIGHAM	allotted	allotted
Address		
· 1 Fitzray Mews, London	LORDINARY (0.02 Pence)	
UK Postcode W i I L & D E		}

	UK Pos	tcode WITLLEDE	<u> </u>	
Signed	MhDilham	Designation#	Date	24.3.04
				3344055 Laserform international 02/00

Package: 'Laserform'

by Laserform International Ltd.

Please complete in typescript,

or in bold black capitals.

CHFP025

**Company Number** 

Company name in full

R	eturn	of	Allotment	of	Shares
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Form 88(2) continuation sheet no:

4313987	
ARK THERAPEUTICS GROUP PLC	

Shareholder details Shares and share class		lass allotted
Name  BRECON HOLDINGS LIMITED	Class of shares allotted	Number allotted
Address		
P O Box 204, Celtic House, Victoria Street, Douglas, Isle of Man	LORDINARY (0.02 Pence)	2,487
UK Postcode		·
Name : Na	Class of shares	
ZIGGUS HOLDINGS LIMITED	allotted	: allotted
Address		: **
East Crowndale Farm, Brook Lane, Tavistock	LORDINARY (0.02 Pence)	L622
	L	·
UK Postcode PL199DP		·
Name	Class of shares	Number
L MERLIN GENERAL PARINER LIMITED (MERLIN BIOSCIENCES FUND LP)	allotted	allotted
Address		
La Motte Chambers, La Motte Street, St Helier, Jersey	ORDINARY (0.02 Pence)	527,996,601
		L
UK Postcode J E L L B J		
Name	Class of shares	Number
MERLIN EQUITY LIMITED	allotted	allotted
Address		j
12 St James's Square, London	LORDINARY (0.02 Pence)	255,868,203
UK Postcode S.W.L.Y. 4 R.B		

Shareholder details	Shares and share class allotte	
Name  UNIVERSITY COLLEGE LONDON CRUCIFORM LTD  Address	Class of shares allotted	Number allotted
Gower Street, London	LORDINARY (0.02 Pence)	_148,499,505
UK Postcode WCLE6BT		<u></u>
Name  IPROF, SEPPO YLA-HERTTUALA	Class of shares allotted	Number allotted
Address		
1 Fitzroy Mews, London	ORDINARY (0.02 Pence)	<u>219,401,721</u>
UK Postcode W.L.T. 6.D.E		
Name PROF. JOHN MARTIN Address	Class of shares allotted	Number allotted
d Fitzroy Mews, London	LORDINARY (0.02 Pence)	35,910,666
UK Postcode W.J.T. 6.D.E		L
Name STEPHEN BARKER	Class of shares	Number allotted
Address Main April 10 Sec		<del>65</del> +2
d Fitzroy Mews, London	LORDINARY (0.02 Pence)	27,968,094
UK Postcode W J T 6 D E		L
Name  IMPERIAL COLLEGE INNOVATIONS LIMITED  Address	Class of shares allotted	Number allotted
Sherfield Building, Imperial College, Exhibition Road, London	LORDINARY (0.02 Pence)	17,325,000
UK Postcode S W 7 _ 2 A Z	L	L
Name  UP LEHTOLAINEN  Address	Class of shares allotted	Number allotted
Flat 2, 8 Market Place, East Finchley, London	LORDINARY (0.02 Pence)	6,599,835
UK Postcode N2 L8BB		<u></u>

	UK Postcode N 2 L & B B	<u> </u>
Signed	MM Warm Designation Director	Date 24.3.04
		3344201

Package:

'Laserform'

by Laserform International Ltd.

Please complete in typescript, or in bold black capitals.

CHFP025

**Company Number** 

Company name in full

### Return of Allotment of Shares

Form 88(2) continuation sheet no:	3	
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43139	87			
APK 1	HERAPEI	TICS G	POLID	

Shareholder details	Shares and share class allotted
Name	Class of shares Number
M, KULOMAA	allotted allotted
Address	
Laatokantie 4, 33450 Siivikkala, Finland	LORDINARY (0.02 Pence) 16,599,835
UK Postcode المالية الم	
Name Spanish Annual Ann	Class of shares Number
V. MARJOMAKI	allotted allotted
Address	
Kangus Vuorentie 3A12, 40320 Jy	ORDINARY (0.02 Pence) (4.950,000
UK Postcode	
Name	Class of shares Number
ık Airenne	allotted allotted
Address	}
Varvisaarentie 8 as 1, 70100 Kuopio, Finland	LORDINARY (0.02 Pence) 15,085,135
	\ \
UK Postcode	
Name	Class of shares Number
ZIGGUS HOLDINGS LIMITED	allotted allotted
Address	
East Crowndale Farm, Brook Lane, Tavistock	LORDINARY (0.02 Pence) 1,003,860
UK Postcode PL199PP	

Shareholder details	Shares and share class allotted	
Name	Class of shares	Number
JUKKA LUOMA	anotted	allotted
Address		
Nuottakaari 2, 70800 Kuopio, Finland	LORDINARY (0.02 Pence)	_119,300,544
	L	
UK Postcode		
Name	Class of shares allotted	Number allotted
LEENA LUOMA		
Address		
Nuottakaari 2, 70800 Kuopio, Finland	LORDINARY (0.02 Pence)	_50,106,276
UK Postcode		
	Class of shares	Number
Name	allotted	allotted
ANU SANDMAIR Address		
Achstrasse 4a, 86316 Friedberg, Germany	LORDINARY (0.02 Pence)	4. 1.017.027
UK Postcode LLLL		
Name	Class of shares	allotted
MARTYN WILLIAMS Address	a large de de	e en Agus à la Se l' La Barrier
1 Fitzroy Mews, London		990.000
ti Fitzioy Wiews, London	L	
UK Postcode W 1 T 6 D E		
Name	Class of shares	Number
PAUL HIGHAM	allotted	allotted
Address		
1 Fitzroy Mews, London	LORDINARY (0.02 Pence)	990,000
UK Postcode W.I.T. 6 D.E	<b>L</b>	<u> </u>
Name	Class of shares	Number
ALAN BOYD	allotted	allotted
Address		
1 Fitzroy Mews, London	LORDINARY (0.02 Pence)	396,000
UK Postcode WIT. 6 DE		

1 Fitzroy Mews, London	ORDINARY (0.02 Pence)	396,000
UK Postcode W.I.T. 6 D.E		
Signed MhDilliam Designations Director		24.3.04 3344049

Package:	'Laserform'	
by Laserform	International Ltd.	

Please complete in typescript, or in bold black capitals.

CHFP025

**Company Number** 

Company name in full

# Return of Allotment of Shares

Form 88(2) continuation s	heet no:	4	

4313987	
ARK THERAPEUTICS GROUP PLC	

Shareholder details	Shares and share o	lass allotted
Name	Class of shares	Number
SIMON BRADBURY	allotted	allotted
Address		
12 Estover Way, Chinnor, Oxon	(ORDINARY (0.02 Pence)	198,000
UK Postcode OXX 3 9 4 T F	Alexander of the second	· · · · · · · · · · · · · · · · · · ·
Name: Heavy this was the suite that the	Class of shares	Number
MERLIN GENERAL PARTNER LIMITED (Merlin Biosciences Fund LP)	allotted	allotted ∴≟
Address	i i i i i i i i i i i i i i i i i i i	
La Motte Chambers, La Motte Street, St Helier, Jersey	(ORDINARY (0.02 Pence)	151,751,754
UK Postcode J E J J B J	L	L
Name	Class of shares	Number
NOMURA INTERNATIONAL PLC	allotted	allotted
Address		
Nomura House, 1 St Martin's-Le-Grand, London	ORDINARY (0.02 Pence)	396,000,000
		L
UK Postcode <u>E C 1 A 4 N P</u>		L
Name	Class of shares	Number
TVM IVGmbH 2 Co. KG	allotted	allotted
Address		
Eingang C, Maximillian Strasse 35, 805 39, Munich, Germany	LORDINARY (0.02 Pence)	297,000,000
UK Postcode		

Shareholder details	Shares and share class allotted	
Name	Class of shares	Number
BIONEX INVESTMENTS PLC	allotted	allotted
Address		
223a Kensington High Street, London	LORDINARY (0.02 Pence)	99,000,000
UK Postcode <u>W 8 ر ر 6 رS رG</u>		
Name	Class of shares allotted	Number allotted
BIO FUND VENTURES II KY		unottoa
Address		
Mikonkatu 4, 3rd floor, PO Box 164, FIN-00101 Helsinki, Finland	LORDINARY (0.02 Pence)	198,000,000
	L	
UK Postcode		
Name	Class of shares allotted	Number allotted
CONCORDIA INVESTOR I KB Address		
Concordia I Capital Ab, Mikonkatu 1 B, FIN-00100 Helsinki, Finland	ORDINARY (0.02 Pence).	164,999,934
	, _	<del></del> ;
UK Postcode	100	<u> </u>
. Name	Class of shares	Number allotted
CONCORDIA INVESTOR II KB Address		anotted (
Concordia II Capital Ab, Mikonkatu I B, FIN-00100 Helsinki, Finland	(ORDINARY (0.02 Pence)	_33,000,066
	L	<del></del> }
UK Postcode	L	
Name	Class of shares	Number
OPTIOMLLIMITED	allotted	allotted
Address		
Erottajankatu 5, 00130 Helsinki, Finland	LORDINARY (0.02 Pence)	49,500,000
UK Postcode		
Name	Class of shares	Number
SAASTAMOISEN SAATIO R.S.	allotted	allotted
Address		}
Aleksanterinkatu 44, 00100 Helsinki, Finland	LORDINARY (0.02 Pence)	49,500,000
UK Postcode		

Signed	MhDilhain	Designation	Director	Date .	24.3.04

Package: 'Laserform'

by Laserform International Ltd.

Please complete in	typescript,
or in bold black cap	itals.

CHFP025

**Company Number** 

Company name in full

Return	of	Allotme	at of	Shares
Rewn	UI.	Anume	n or	onares

Form 88(2) continuation sheet no:	5	
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ARK	THER	APUTIC	S GRO	OUP PLC

Names and addresses of the allottees (List joint share allotments consecutively)

4313987

Shareholder details	Shares and share c	lass allotted
Name	Class of shares	Number
SAMPO PLC	allotted	allotted
Address		
Aleksanterinkatu II, 0025 Sampo, Finland	LORDINARY (0.02 Pence)	49,500,000
UK Postcode LLLL		L
Name	Class of shares	Number
MERLIN GENERAL PARTNER II LIMITED (Merlin Biosciences Fund LP)	allotted *	allotted ∌
Address	la de la companya de La companya de la co	
La Motte Chambers, La Motte Street, St Helier, Jersey	LORDINARY (0.02 Pence)	L186,775,380
UK Postcode J E I _ 1 B J		<u> </u>
Name	Class of shares	Number
MERLIN GENERAL PARTNER II LIMITED (Merlin Biosciences Fund GBR) Address	allotted	allotted
La Motte Chambers, La Motte Street, St Heljer, Jersey, Channel Islands	ORDINARY (0.02 Pence)	11,224,620
	<u> </u>	L
UK Postcode J E 1 L B J	<u> </u>	L
Name	Class of shares	Number
NOMURA INTERNATIONAL PLC	allotted	allotted
Address		
Nomura House, 1 St Martin's-Le-Grand, London	ORDINARY (0.02 Pence)	198,000,000
UK Postcode EC1A4NP	L	

Shareholder details	Shares and share class allotted		
Name	Class of shares allotted	Number allotted	
TVM IV Gmbh & Co. KG	anotted	anotted	
Address			
Eingang C, Maximillian Strasse 35, 805 39, Munich, Germany	LORDINARY (0.02 Pence)	79,200,000	
UK Postcode		<u> </u>	
Name	Class of shares	Number	
BIONEX INVESTMENTS PLC	allotted	allotted	
Address			
223a Kensington High Street, London	LORDINARY (0.02 Pence)	<u> 15,840,00</u> 0	
		<b>L</b>	
UK Postcode W & 6 S G	<u> </u>		
Name	Class of shares allotted	Number allotted	
BIO FUND VENTURES II KY		anotted	
Address			
Mikonkatu 4, 3rd floor, PO Box 164, FIN-00101 Helsinki, Finland	ORDINARY (0.02 Pence)	_158,400,000	
	1.		
UK Postcode			
Name Specific Approximation (Control of Control of Cont	Class of shares	Number allotted	
CONCORDIA INVESTOR LKb Address			
		3/	
(Concordia   Capital Ab, Mikonkatu   B, FIN-00100 Helsinki, Finland	ORDINARY (0.02 Pence)	<u>66,000,033</u>	
UK Postcode			
Name	Class of shares	Number	
CONCORDIA INVESTOR II Kb	allotted	allotted	
Address	<u> </u>		
(Concordia II Capital Ab, Mikonkatu 1 B, FIN-00100 Helsinki, Finland	LORDINARY (0.02 Pence)	13,199,967	
UK Postcode			
Name	Class of shares	Number allotted	
BANKINVEST	allotted	anotteu	
Address			
Sundkrogsgade 7, PO Box 2672, DK-2100 Kobenhavn Q, Denmark	LORDINARY (0.02 Pence)	<u>198,000,000</u>	
UK Postcode			

UK Postcode LLLLL		L
Name	Class of shares	Number
BANKINVEST	allotted	allotted
Address		
Sundkrogsgade 7, PO Box 2672, DK-2100 Kobenhavn Q, Denmark	LORDINARY (0.02 Pence)	<u> 198,000,000</u>
		<u> </u>
UK Postcode		
110 011		
Signed MM Julian Designations Director	Date	24.3.04
		3344249 Laserform Informational 02/

Package: 'Laserform' by Laserform International Ltd.

Please complete in typescript, or in bold black capitals.

Return of Allotment of Shares

Form 88(2) continuation sheet no:

6

CHFP025

Company	Number
---------	--------

Company name in full

4313987		 	

ARK THERAPUTICS GROUP PLC

Shareholder details	Shares and share	class allotted
Name	Class of shares	Number
GARTMORE INVESTMENT MANAGEMENT	allotted	allotted
Address		
	ORDINARY (0.02 Pence)	158,400,000
UK Postcode	49	An estimate the second
Name the française to be a second of the sec	Class of shares	
NORTHERN INVESTORS COMPANY PLC	allotted	allotted
Address	A Company of the Comp	1
Northumberland House, Princess Square, Newcastle Upon Tyne	LORDINARY (0.02 Pence)	39,600,000
<u> </u>		<b></b>
UK Postcode N E I _ 8 E R		L
Name	Class of shares	Number
HEINRICH SCHULTE	allotted	allotted
Address		
d Fitzroy Mews, London	LORDINARY (0.02 Pence)	7,920,099
	L	<u> </u>
UK Postcode W J J G D E		<u> </u>
Name	Class of shares	Number
DENNIS TURNER	allotted	allotted
Address		·
l Fitzroy Mews, London	LORDINARY (0.02 Pence)	4,752,099
	<u> </u>	
UK Postcode W.I.T. 6.D.E		<u> </u>

Shareholder details	Shares and share o	lass allotted
Name	Class of shares	Number
MARTYN WILLIAMS	allotted	allotted
Address		
d Fitzroy Mews, London	LORDINARY (0.02 Pence)	1,188,000
UK Postcode ، W یا ی تا ی E		
Name	Class of shares allotted	Number allotted
ALAN BOYD	anoned	anotted
Address		
ıl Fitzroy Mews, London	LORDINARY (0.02 Pence)	792,000
\	<u> </u>	
UK Postcode W L T C 6 D E	L	<u> </u>
Name	Class of shares allotted	Number allotted
PAUL HIGHAM	anoned	anotted
Address		
(1 Fitzroy Mews, London	LORDINARY (0.02 Pence)	2,376,000
	12.	
UK Postcode W L T 6 D E		
Name State Control of the Control of	Class of shares allotted	Number allotted
BRECON HOLDINGS LIMITED		
Address Address		
P O Box 204, Celtic House, Victoria Street, Douglas, Isle of Man	LORDINARY (0.02 Pence)	1,584,099
LUK Bastanda		
UK Postcode		
Name	Class of shares allotted	Number allotted
ZIGGUS HOLDINGS LIMITED		,
Address		; j
East Crowndale Farm, Brook Lane, Tavistock	LORDINARY (0.02 Pence)	396,000
UK Postcode PLIB99DP	L	
Name	Class of shares	Number
WALLBROOK TRUSTEES (GUERNSEY) LIMITED Address	allotted	allotted
PO Box 671, St Peter's House, Le Bordage, St Peter's Port, Guernsey	LORDINARY (1 Pence)	3,350,304
	·	<u> </u>
UK Postcode G Y L 3 S T		

PO Box 671, St Peter's House, Le Bordage, St Peter's Port, Guernsey	LORDINARY (L Pence)	3,350,304
UK Postcode G Y L 3 S T	L	
Signed Mh Wam Designation Directed	Date _	24.3.04 33442889 artifolia 02/00

Shareholder details	Shares and share class allotted	
Name CONCORDIA INVESTOR II Kb.	Class of shares allotted	Number allotted
Address		
Mikonkatu 1B, FIN-00100, Helsinki, Finland	LORDINARY (0.02 Pence)	20,72J
UK Postcode		
Name	Class of shares allotted	Number allotted
Address		
		<u> </u>
UK Postcode		L
Name	Class of shares allotted	Number allotted
Address		
The second state and experience of the second state of the second		. j se sa
UK Postcode		14 14 14 14 14 14 14 14 14 14 14 14 14 1
Name	Class of shares allotted	
Address Communication of Communication o	· · · · · · · · · · · · · · · · · · ·	s Basasan sa
UK Postcode		
Name	Class of shares allotted	Number allotted
Address		
UK Postcode		
Name	Class of shares allotted	Number allotted
Address		
		<u> </u>
UK Postcode		

<u> </u>	UK Postcode	
Signed	MA Designation Director	Date 24-3-04
		3351065
		<del></del>



#### Return of Allotment of Shares

Please complete in typescript, or in bold black capitals. CHWP000

**Company Number** 

4313987

ARK	THERNPEUTICS	GROUP	LTD.

Company name in full	ARK THERMPE	utics Grou	P LTD.
Shares allotted (including bon	ue charac).		
Onaics anotica (molading bon	From		То
Date or period during which shares were allotted		Year Day M	Ionth Year
(If shares were allotted on one date enter that date in the "from" box)	1/2/0/2/2/0	0104	
Class of shares (ordinary or preference etc)	ORDINARU		·
Number allotted	175,000	1 († 3) 6 (s) - 1 (s)	4 1.5.11 4 4.1
Nominal value of each share	002p	· · · · · · · · · · · · · · · · · · ·	* ************************************
Amount (if any) paid or due on each share (including any share premium)	E 1-21	9/3.7	के अस्ति । के कर
List the names and addresses of the	allottees and the number of s	shares allotted to each o	overleaf
if the allotted shares are fully o	or partly paid up otherwis	se than in cash plea	se state:
% that each share is to be			

treated as paid up

100%

Consideration for which the shares were allotted (This information must be supported by the duly stamped contract or by the duly stamped particulars on Form 88(3) if the contract is not in writing)

£ 211,750

When you have completed and signed the form send it to the Registrar of Companies at:



26/03/04

Companies House, Crown Way, Cardiff CF14 3UZ For companies registered in England and Wales

DX 33050 Cardiff

Companies House, 37 Castle Terrace, Edinburgh EH1 2EB For companies registered in Scotland

DX 235 Edinburgh or LP - 4 Edinburgh 2

Form revised 10/03

Shareholder details		Shares and share cl	Shares and share class allotted	
Name IMPERIAL COLLEGE / NAOVAI	10NS LTO.	Class of shares allotted	Number allotted	
Address SHERFIELD BUILDING !		ORDINARY	175,000	
EXHIBITION ROAD, LON	code SNF 2AZ	L		
Name		Class of shares	Number allotted	
Address				
		<u></u>	<u> </u>	
UK Posto	code			
Name		Class of shares allotted	Number allotted	
Address			<u> </u>	
UK Posto	code - L L L L L L L		12 (700, 10 10 10 10 10 10 10 10 10 10 10 10 10	
Name		Class of shares	allotted	
Address	e en			
LIK Posto	ode LLLLL			
Name		Class of shares allotted	Number allotted	
Address		dilottos		
UK Postc	ode LLLLLL			
Please enter the number of continuation	Dat	3.3.04		
A director /secretary / administrator / admini	trative receiver / receiver manager / receiver	Please delet	e as appropriate	
information in the box opposite but If you do, it will help Companies House to contact you if there is a	Ashurst, Broadwalh Hous Loadon, ECZA ZHA	e, \$ 5 Appold Street	7	
query on the form. The contact information that you give will be	OPA/ALKOZ. 00001	Tel DX exchange		
ecord.				



88(2)

Return of Allotment of Shares

Please complete in typescript, or in bold black capitals. CHWP000

Company Number

11313987

Company name in full

ARK	THERAPEUTICS	GROUP	PLC	

Snares	anotted	(incinaing	ponus	snares)	i

Date or period during which shares were allotted (If shares were allotted on one date enter that date in the "from" box) From To

Day Month Year Day Month Year

2 6 0 2 2 0 0 4

Class of shares (ordinary or preference etc)

Number allotted

Nominal value of each share

Amount (if any) paid or due on each share (including any share premium)

CORDINARY	D'ORDINARY	
1,250,000	250,000	. : # 
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List the names and addresses of the allottees and the number of shares allotted to each overleaf

If the allotted shares are fully or partly paid up otherwise than in cash please state:

% that each share is to be treated as paid up

Consideration for which the shares were allotted (This information must be supported by the duly stamped contract or by the duly stamped particulars on Form 88(3) if the contract is not in writing)

		ł
	<del></del>	
<u> </u>		

When you have completed and signed the form send it to the Registrar of Companies at:



COMPANIES HOUSE

0603 26/03/04 Companies House, Crown Way, Cardiff CF14 3UZ For companies registered in England and Wales

DX 33050 Cardiff

Companies House, 37 Castle Terrace, Edinburgh EH1 2EB For companies registered in Scotland

DX 235 Edinburgh or LP - 4 Edinburgh 2

Form revised 10/03

Shareholder details		Shares and share class allotted	
Name WALBROOK TRUSTEES (GUERNSEY) LTD Address	o	Class of shares allotted	Number allotted
		CORDINARY	1,250,000
LE BORDAGE, ST. PETER'S HOUSE,			250,000
GUERNSEY UK Postcode GILL 3 H.	V		
Name		Class of shares allotted	Number allotted
Address		anottou	anouou
			L
UK Postcode			
Name		Class of shares allotted	Number allotted
Address			
Land to the second seco			
UK Postcode LLLLL			
Name		Class of shares allotted	Number allotted
Address			
UK Postcode			
Name		Class of shares allotted	Number allotted
Address			
		<u> </u>	<del></del>
UK Postcode L L L L L			
Please enter the number of continuation sheets (if any) attached to	this for	n	
igned Mh Main	Date	2.3.04	
A director / secretary / administrator / administrativa receiver / receiver manager	/ receiver	Please delet	e as appropriate
ou do not have to give any contact formation in the box opposite but you do, it will help Companies ouse to contact you if there is a		e, 5 Appold Str	cet,
uery on the form. The contact formation that you give will be sible to searchers of the public ecord.  Dra Jarkot ocoo DX number	DX	Tel ( exchange	

# APPENDIX 11

Listing particulars, dated March 3, 2004

# RECARke Therapeutics Group plc

2004 JUL 15 A 10: 18

Listing Particulars

OFFICE OF INTERNATIONAL CORPORATE FINANCE



Sponsor, Lead Manager and Bookrunner Credit Suisse First Boston

> **Co-Lead Manager** Nomura International

A copy of this document, which comprises listing particulars relating to Ark Therapeutics Group plc prepared in accordance with the listing rules made under section 74 of the Financial Services and Markets Act 2000, has been delivered for registration to the Registrar of Companies in England and Wales as required by section 83 of that Act.

Application has been made to the UK Listing Authority under the provisions of Chapter 20 of the Listing Rules and to the London Stock Exchange for the Ordinary Shares, issued and to be issued pursuant to the Offer, to be admitted to listing on the Official List of the UK Listing Authority and to trading on the London Stock Exchange's main market for listed securities. Conditional dealings in the Ordinary Shares are expected to commence on the London Stock Exchange on 3 March 2004. It is expected that Admission will become effective and that unconditional dealings in the Ordinary Shares will commence on 8 March 2004. Dealings on the London Stock Exchange before Admission will only be settled if Admission takes place and will be for settlement three business days after Admission. All dealings before the commencement of unconditional dealings will be of no effect if Admission does not take place and such dealings will be at the sole risk of the parties concerned.

The Directors of the Company, whose names appear on page 6 of this document, accept responsibility for the information contained in this document. To the best of the knowledge and belief of the Directors (who have taken all reasonable care to ensure that such is the case) the information contained in this document is in accordance with the facts and does not omit anything likely to affect the import of such information.

These Listing Particulars do not constitute an offer to sell or the solicitation of an offer to buy shares in any jurisdiction in which such an offer or solicitation is unlawful. The Ordinary Shares have not been and will not be registered under the US Securities Act of 1933, as amended and, subject to certain exceptions, may not be offered or sold within the United States or to, or for the account or benefit of, US persons (as defined in Regulation S under the Securities Act). The Ordinary Shares are being offered and sold outside the United States to non-US persons in reliance on Regulation S and within the United States only to "qualified institutional buyers" (as defined in Rule 144A under the Securities Act) in transactions exempt from the registration requirements of the Securities Act. Prospective purchasers are hereby notified that sellers of the Ordinary Shares may be relying on the exemption from the provisions of section 5 of the Securities Act provided by Rule 144A. For a description of these and certain further restrictions on the placing, sale and transfer of the Ordinary Shares and distribution of this document, see "Details of the Offer" set out in Part IX of this document.

Ark Therapeutics Group plc (incorporated and registered in England and Wales under the Companies Acts 1985 to 1989 with number 4313987)

Global Offer of 41,555,996 Ordinary Shares of 1 pence each at a price of 133 pence per share and Admission to the Official List and to trading on the London Stock Exchange

Sponsor, Lead Manager and Bookrunner

#### **Credit Suisse First Boston**

Co-Lead Manager

#### Nomura International

41,413,996 Ordinary Shares are being offered by the Company and 142,000 Ordinary Shares are being offered by the Selling Shareholders (as defined herein) in the Offer. The Ordinary Shares are being offered to certain institutional investors in the United Kingdom, QIBs in the United States and certain institutional investors in the rest of the world by way of the Offer.

Prospective investors should be aware that an investment in the Company involves a higher than normal degree of risk. Your attention is drawn to the section entitled "Risk Factors" in Part III of this document.

In connection with the Offer, Credit Suisse First Boston (or any agent or other person acting for Credit Suisse First Boston) as stabilising manager, may over-allocate or effect other transactions intended to enable it to satisfy any over-allocations or which stabilise, maintain, support or otherwise affect the market price of the Ordinary Shares, at a level higher than that which might otherwise prevail, for a limited period after Admission. However, there is no obligation on Credit Suisse First Boston, or any agent of Credit Suisse First Boston, to do this. Such transactions may be effected on the London Stock Exchange and any other securities market, over the counter market, stock exchange or otherwise. Such transactions, if commenced, may be discontinued at any time, and must be brought to an end after a limited period. Save as required by law or regulation, Credit Suisse First Boston does not intend to disclose the extent of any over-allocations and/or stabilisation under the Offer.

In connection with the Offer, the Company has granted to Credit Suisse First Boston, on behalf of the Underwriters, an over-allotment option, which is exercisable upon notice by Credit Suisse First Boston for 30 days after the date of Admission. Pursuant to the Over-Allotment Option, Credit Suisse First Boston may require the Company to issue up to, in aggregate, 6,233,399 additional Ordinary Shares at the Offer Price for the purposes of meeting over-allotments in connection with the Offer, and to cover short positions resulting from stabilisation transactions.

#### CHARE CARITAL IMMEDIATELY FOLLOWING ADMISSION

SHARE CAPITAL IMMEDIATELY I GLEOWING ADMISSION				
Authorised			Issued and fully paid*	
Number	Amount	Ordinary Shares of 1 pence each	Number	Amount
200,000,000	£2,000,000		126,220,994	1,262,210

<sup>\*</sup> assuming no exercise of the Over-Allotment Option

Credit Suisse First Boston and Nomura International plc, which are regulated in the United Kingdom by The Financial Services Authority, are acting exclusively for Ark Therapeutics Group plc in relation to the Offer. Credit Suisse First Boston and Nomura are not acting for, and will not be responsible to, any person other than Ark for providing the protections afforded to clients of Credit Suisse First Boston and Nomura or for advising any other person on the contents of these Listing Particulars or any transaction or arrangement referred to herein.

The New Ordinary Shares will, upon Admission, rank pari passu in all respects with the existing Ordinary Shares, including the right to receive all dividends or other distributions declared, made or paid after Admission.

Any reproduction or distribution of these Listing Particulars, in whole or in part, and any disclosure of their contents or use of any information herein for any purpose other than considering an investment in the Ordinary Shares offered hereby is prohibited, except to the extent such information is otherwise publicly available. Each person receiving a copy of these Listing Particulars by accepting delivery of these Listing Particulars agrees to the foregoing.

Notwithstanding anything in these Listing Particulars to the contrary, the Group and each prospective investor (and any employee, representative or other agent of the Group or any prospective investor) may disclose to any and all persons, without limitation of any kind, the US federal income tax treatment and tax structure of the transactions contemplated by these Listing Particulars and all materials of any kind (including opinions or other tax analyses) that are provided to it relating to such tax treatment and tax structure. However, any such information relating to the US federal income tax treatment or tax structure is only required to be kept confidential in the US to the extent necessary to comply with any applicable US securities laws.

These Listing Particulars and their contents should not be distributed to persons with addresses in Japan or Australia or to any corporation, partnership or other entity created or organised under the laws thereof, where such distribution may lead to breach of any law or regulatory requirements. No document in relation to the Offer has been, or will be lodged with, or registered by, the Australian Securities and Investments Commission, and no registration statement has been or will be filed with the Japanese Ministry of Finance in relation to Ordinary Shares issued or to be issued pursuant to the Offer. Accordingly, subject to certain exceptions, the Ordinary Shares may not, directly or indirectly, be sold to a resident of Australia or Japan.

The distribution of these Listing Particulars and the offer and sale of the Ordinary Shares in certain jurisdictions may be restricted by law. No action has been taken by the Company, the Selling Shareholders or the Underwriters that would permit a public offer of Ordinary Shares or possession or distribution of these Listing Particulars where action for that purpose is required. Persons into whose possession these Listing Particulars come should inform themselves about and observe any such restrictions. Any failure to comply with these restrictions may constitute a violation of the securities laws of any such jurisdiction. These Listing Particulars do not constitute an offer of, or an invitation to purchase, any Ordinary Shares in any jurisdiction in which such offer or invitation would be unlawful. Further information with regard to restrictions on offers and sales of the Ordinary Shares and the distribution of this document is set out in Part IX — "Details of the Offer".

Each purchaser of Ordinary Shares offered hereby in making its purchase will be deemed to have made certain acknowledgements, representations and agreements as set out in the section headed "Investor Representations and Agreements" of Part IX — "Details of the Offer".

No person has been authorised to give any information or to make any representation other than those contained in these Listing Particulars in connection with the Offer and, if given or made, such information or representation must not be relied upon as having been authorised by or on behalf of the Company, the Selling Shareholders or the Underwriters. These Listing Particulars do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities to which they relate or an offer to sell or the solicitation of an offer to buy such securities by any person in any circumstances in which such offer or solicitation is unlawful. Without prejudice to any obligation of the Company to publish supplementary listing particulars pursuant to section 81 of the Financial Services and Markets Act 2000 and paragraph 5.14 of the Listing Rules, neither the delivery of these Listing Particulars at any time nor any sale made under these Listing Particulars shall, under any circumstances, create any implication that there has been no change in the business or affairs of the Company or of the Company and its subsidiaries and affiliates taken as a whole since the date hereof or that the information contained herein is correct as of any time subsequent to its date.

The information contained in these Listing Particulars has been provided by the Company. Neither Underwriter makes any representation, express or implied, or accepts responsibility with respect to the accuracy or completeness of any of the information in these Listing Particulars. These Listing Particulars are not intended to provide the basis of any credit or other evaluation and should not be considered as a recommendation by any of the Company, the Selling Shareholders or the Underwriters that any recipient of these Listing Particulars should purchase the Ordinary Shares.

THE ORDINARY SHARES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE US SECURITIES AND EXCHANGE COMMISSION, ANY STATE SECURITIES COMMISSION IN THE UNITED STATES OR ANY OTHER US REGULATORY AUTHORITY, NOR HAVE ANY OF THE

FOREGOING AUTHORITIES PASSED UPON OR ENDORSED THE MERITS OF THE OFFER OF THE ORDINARY SHARES OR THE ACCURACY OR ADEQUACY OF THESE LISTING PARTICULARS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENCE IN THE UNITED STATES.

NOTICE TO NEW HAMPSHIRE RESIDENTS ONLY: NEITHER THE FACT THAT A REGISTRATION STATEMENT OR AN APPLICATION FOR A LICENCE HAS BEEN FILED UNDER CHAPTER 421-B OF THE NEW HAMPSHIRE REVISED STATUTES ANNOTATED ("RSA") WITH THE STATE OF NEW HAMPSHIRE NOR THE FACT THAT A SECURITY IS EFFECTIVELY REGISTERED OR A PERSON IS LICENSED IN THE STATE OF NEW HAMPSHIRE CONSTITUTES A FINDING BY THE SECRETARY OF STATE OF NEW HAMPSHIRE THAT ANY DOCUMENT FILED UNDER RSA 421-B IS TRUE, COMPLETE AND NOT MISLEADING. NEITHER ANY SUCH FACT NOR THE FACT THAT AN EXEMPTION OR EXCEPTION IS AVAILABLE FOR A SECURITY OR A TRANSACTION MEANS THAT THE SECRETARY OF STATE HAS PASSED IN ANY WAY UPON THE MERITS OR QUALIFICATIONS OF, OR RECOMMENDED OR GIVEN APPROVAL TO, ANY PERSON, SECURITY OR TRANSACTION. IT IS UNLAWFUL TO MAKE, OR CAUSE TO BE MADE, TO ANY PROSPECTIVE PURCHASER, CUSTOMER OR CLIENT ANY REPRESENTATION INCONSISTENT WITH THE PROVISIONS OF THIS PARAGRAPH.

The contents of these Listing Particulars are not to be construed as legal, business or tax advice. Each prospective investor should consult its own legal adviser, financial adviser or tax adviser for legal, financial or tax advice.

Certain terms used in this document are defined and certain technical and other terms used in this document are explained in the sections headed "Definitions" and "Glossary".

Unless the context otherwise requires or it is expressly provided to the contrary, the information in this document assumes no exercise of the Over-Allotment Option. All times referred to in this document are, unless otherwise stated, references to London time.

#### PRESENTATION OF FINANCIAL INFORMATION

Financial information in this document has been prepared in accordance with accounting standards generally accepted in the United Kingdom. UK GAAP differs in certain significant respects from accounting standards generally accepted in the United States and International Accounting Standards. A summary of the principal differences between UK GAAP, US GAAP and IAS is set out in Part VII of this document. The Company has not quantified the impact of those differences. In making an investment decision, potential investors must rely upon their own examination of the Group and the financial information provided in this document. Potential investors should consult their own professional advisers for an understanding of the differences between UK GAAP, US GAAP and IAS.

The Accountants' Report included in Part VIII of this document has been prepared in accordance with the Statements of Investment Circular Reporting Standards issued by the Auditing Practices Board in the UK and the related consent to its inclusion in these Listing Particulars appearing in Part X has been included as required by the UK Listing Authority and solely for that purpose. Such report and consent were not prepared in accordance with standards generally accepted in the United States. Under such US standards and based upon work performed, no audit report or any other form of assurance could be issued with respect to the financial information. Accordingly, no opinion nor any other assurance with regard to the financial information is expressed under generally accepted auditing standards in the United States. The statutory financial statements underlying the Accountants' Report were audited in accordance with auditing standards generally accepted in the United Kingdom.

#### FORWARD-LOOKING STATEMENTS

These Listing Particulars include "forward-looking statements" which include all statements other than statements of historical facts, including, without limitation, those regarding the Group's financial position, business strategy, plans and objectives of management for future operations (including development plans and objectives relating to the Group's products and services), and any statements preceded by, followed by or that include forward-looking terminology such as the words "targets", "believes", "estimates", "expects", "aims", "intends", "will", "can", "may", "anticipates", "would", "should", "could" or similar expressions or the negative thereof. Such forward-looking statements involve known and unknown risks,

uncertainties and other important factors beyond the Group's control that could cause the actual results, performance or achievements of the Group to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding the Group's present and future business strategies and the environment in which the Group will operate in the future. Among the important factors that could cause the Group's actual results, performance or achievements to differ materially from those in forward-looking statements include those factors in Part III — "Risk Factors", Part VII — "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in these Listing Particulars. These forward-looking statements speak only as at the date of this document. The Group expressly disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statements contained herein to reflect any change in the Group's expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based unless required to do so by the Listing Rules. As a result of these factors, the events described in the forward-looking statements in these Listing Particulars may not occur.

#### AVAILABLE INFORMATION

Neither the Company nor any of its subsidiaries is required to file periodic reports under section 13 or section 15(d) of the US Securities Exchange Act of 1934, as amended. The Company intends to apply for an ongoing exemption from the reporting requirements of the Exchange Act pursuant to Rule 12g3-2(b) thereunder and will agree to furnish certain documents to the US Securities and Exchange Commission pursuant to such rule. The Company has agreed that it will, during any period in which it is neither subject to section 13 or section 15(d) of the Exchange Act nor exempt from reporting pursuant to Rule 12g3-2(b) thereunder, deliver to the holder or beneficial owner of such restricted securities or to any prospective purchaser of the restricted securities designated by any such holder or beneficial owner, upon the request of such holder, beneficial owner or prospective purchaser, the information required to be delivered pursuant to Rule 144A(d)(4) under the Securities Act.

#### ENFORCEABILITY OF JUDGMENTS

The Company is a public limited company incorporated under the laws of England and Wales. The Directors and executive officers of the Company are citizens or residents of countries other than the United States, principally the United Kingdom and Finland. A substantial portion of the assets of such persons and a substantial portion of the assets of the Company are located outside the United States. As a result, it may not be possible for investors to effect service of process within the United States upon such persons or the Company, or to enforce against them judgments of US courts, including judgments predicated upon civil liabilities under the securities laws of the United States or any state or territory within the United States. There is substantial doubt as to the enforceability in the United Kingdom or Finland, in original actions or in actions for enforcement of judgments of US courts, based on the civil liability provisions of US federal securities laws.

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# DIRECTORS, SECRETARY, REGISTERED OFFICE AND ADVISERS

**Directors** 

Dennis Michael John Turner

Dr Nigel Richard Parker

Martyn Douglas Williams

Professor Seppo Pasi Antero

Ylä-Herttuala

Peter Stephen Keen

Sir Mark Henry Richmond

Dr Wolfgang Plischke

all of whose business address is

Ark Therapeutics Group plc

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Company secretary

Martyn Williams

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Advisers

**Sponsor** 

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Credit Suisse First Boston Equities Limited

One Cabot Square London E14 4QJ

Co-Lead Manager

Nomura International plc Nomura House 1 St Martin's-le-Grand London EC1A 4NP

English and US Legal Advisers to the

Company

Ashurst

Broadwalk House 5 Appold Street London EC2A 2HA

**English and US Legal Advisers to Credit** Suisse First Boston and Nomura

Jones Day 21 Tudor Street London EC4Y 0DJ (Non-executive Chairman)

(Chief Executive Officer)

(Chief Financial Officer)

(Consultant Director of Molecular Medicine and Non-executive Director)

(Non-executive Director)

(Non-executive Director and Senior Independent Director)

(Non-executive Director)

**Auditors and Reporting Accountants** 

Deloitte & Touche LLP

Leda House Station Road

Cambridge CB1 2RN

Scientific Experts

Cambridge Consultants Limited

Science Park Milton Road

Cambridge CB4 0DW

**Patent Attorneys** 

Gill Jennings & Every

Broadgate House 7 Eldon Street

London EC2M 7LH

Registrars

Capita IRG Plc

The Registry

34 Beckenham Road

Beckenham

Kent BR3 4TU

Principal Bankers

Barclays Bank plc

Cambridge Business Centre

P.O. Box 326

Cambridge CB4 3UT

# **OFFER STATISTICS**

Offer Price	133 pence
Total number of Ordinary Shares subject to the Offer <sup>(1)</sup>	41,555,996
Number of New Ordinary Shares in the Offer <sup>(1)</sup>	41,413,996
Number of Ordinary Shares to be sold by the Selling Shareholders in the Offer	142,000
Maximum number of Ordinary Shares which may be issued by the Company pursuant	
to the Over-Allotment Option	6,233,399
Number of Ordinary Shares in issue following the Offer <sup>(1)</sup>	126,220,994
Enlarged market capitalisation at the Offer Price <sup>(1)</sup>	£167.9 million
Percentage of enlarged issued share capital being offered <sup>(1)</sup>	33%
Estimated net cash proceeds of the Offer to be received by the Company <sup>(1)</sup>	£50.3 million

# EXPECTED TIMETABLE(2)

	2004
Conditional dealings commence on the London Stock Exchange <sup>(3)</sup>	3 March
Admission of the Ordinary Shares to the Official List and commencement of unconditional dealings in the Ordinary Shares on the main market of the London	
Stock Exchange	8 a.m. 8 March
CREST accounts credited by	8.30 a.m. 8 March 15 March

<sup>(1)</sup> Assuming no shares are issued pursuant to an exercise of the Over-Allotment Option.

<sup>(2)</sup> Each of the times and dates in the above timetable is subject to change.

<sup>(3)</sup> It should be noted that if Admission does not occur, all conditional dealings will be of no effect and any such dealings will be at the sole risk of the parties concerned.

### PART I — KEY INFORMATION

The following summary information does not purport to be complete and should be read in conjunction with the more detailed information appearing elsewhere in this document, including the Accountants' Report in Part VIII from which it is partly derived. In addition to the summary below, Part III — "Risk Factors" sets out certain information that prospective investors should carefully consider before making any investment in the Company. Certain information contained in this summary and elsewhere in this document, including information with respect to the Directors' plans and strategy for Ark's business and related financings, are forward-looking statements which involve risks and uncertainties. For a discussion of important factors which could cause actual results to differ materially from the forward-looking statements contained in this document, see Part III — "Risk Factors", Part VII — "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Forward-looking Statements" on page 3 of this document.

#### INTRODUCTION

Ark is an emerging healthcare group with one product introduced into hospitals and three further lead products in late stage clinical development. Capitalising on over ten years of research in vascular biology and gene-based medicine, Ark has created a balanced portfolio of proprietary healthcare products targeted at specific unmet clinical needs within vascular disease and cancer. These are large and growing markets, where opportunities exist for effective new products to generate significant revenues.

Ark's products are sourced from related but largely non-dependent technologies within the Group and have been selected to enable the Group to take each product through development within its own means and to benefit from Orphan Drug Status and/or Fast Track Designation, as appropriate. This strategy has allowed the Group to retain greater value and greater control of clinical development timelines, and to mitigate the risks of dependency on any one particular programme or development partner. Ark has secured patents or has patent applications pending for all its lead products in principal pharmaceutical markets. During development, the Group retains the right to market its lead products in the key North American and European markets.

Ark has its origins in businesses established in the mid-1990s by Professor John Martin and Dr Stephen Barker of University College London and Professor Seppo Ylä-Herttuala of the AI Virtanen Institute at the University of Kuopio, Finland, all of whom continue to play leading roles in the Group's research and development programmes.

The Directors believe that the Group's product portfolio, the commencement of product revenues, its balance of risk and its policy of retaining value and control place Ark in a strong position as an emerging healthcare group.

## LEAD PRODUCTS

Ark's four lead products, each of which has originated from the research work of its world renowned scientific and clinical teams based in Finland and the UK, are summarised below:

Cerepro<sup>TM</sup>

a novel gene-based therapy for the treatment of patients with certain operable brain tumours, which has almost doubled mean survival time, when compared to existing standard treatment, in two safety and efficacy studies. This product has been awarded Orphan Drug Status by both the FDA and EMEA, and the Company currently expects that first filing for EU marketing approval will occur before the end of 2007.

Vitor<sup>TM</sup>

an oral therapy for the treatment of muscle wasting (cachexia) that occurs in patients with cancer. Currently in Phase III trials due for completion in 2004, Ark has received Fast Track Designation from the FDA. The Company currently expects that first filing for EU marketing approval will occur in 2005.

Trinam®

a novel gene-based therapy and biodegradable delivery device. The first application for which Trinam® is being developed is the prevention of the blocking of the plastic tubes implanted into the arms of patients with kidney failure to enable life-saving haemodialysis. Approved for Phase II/III trials, the FDA has awarded it Orphan Drug Status. The Company currently expects that first filing for EU marketing approval will occur in 2007.

a novel wound dressing device for leg and foot ulcers introduced to hospitals in the UK in November 2003. It has been listed with the FDA, allowing it to be marketed in the US.

#### FOLLOW-ON PORTFOLIO

Ark's lead products are supported by a strong follow-on portfolio of products and pre-clinical pipeline. The follow-on products each focus on areas of clear unmet medical need, and comprise a potential treatment in Phase II (EG005) for a fat metabolism disorder (lipodystrophy) which can occur in HIV positive patients receiving antiretroviral therapy, and an *in vitro* diagnostic test (EG010) which predicts the likelihood of a serious cardiac event (eg heart attack), which the Directors believe will be amongst the first to comply with EU and US equivocal zone requirements. Ark's pre-clinical portfolio of programmes comprises peptides, small molecules and DNA/gene-based medicines and platforms which are all well progressed — mostly to *in vivo* proof of principle.

The overall relationship between the Group's research capabilities, products and pre-clinical pipeline are illustrated in the table below:

Research Group	Products	Pre-clinical pipeline	
Vascular biology and growth factors	Kerraboot® Vitor™ EG005 Trinam® <sup>(1)</sup>	Neuropilin-1 antagonist VEGF antagonists and agonists	
Gene-based medicines and vectors	Trinam <sup>®(1)</sup> Cerepro <sup>™</sup> EG010	Baculovirus — vectors — functional genomics  Scavidin® — drug targeting platform	

Note:

(1) Trinam<sup>®</sup> is derived from work conducted by both the vascular biology and gene-based medicines research groups

#### **BUSINESS STRATEGY**

Over the last 5 years, Ark has developed its broad clinical pipeline of commercially attractive products through a tripartite strategy:

- Address areas of clear unmet clinical need in vascular disease and cancer where effective new
  products can generate significant revenues without having to displace existing treatments.
- Focus on specialist areas of medicine where development and marketing costs are generally lower
  and which can benefit from Orphan Drug and Fast Track regulatory pathways in order to minimise
  dependency on pharmaceutical partners, retain control over development programmes and maximise
  retained value.
- Apply rigorous commercial screening of all potential product candidates at an early stage and select only those that Ark believes capable of delivering well-defined clinical benefits and that are suitable for in-house development.

### SUMMARY FINANCIAL RECORD

The following table, which has been extracted without material adjustment from the Accountants' Report set out in Part VIII of this document, summarises the financial record of the Group for the year ended

- 31 March 2001, the nine months ended 31 December 2001 and the years ended 31 December 2002 and
- 31 December 2003. Investors should read the whole of the Accountants' Report, as well as Part VII

"Management's Discussion and Analysis of Financial Condition and Results of Operations" and should not just rely on the summary below.

	Year ended 31 March 2001 £'000	9 months ended 31 December 2001 £'000	Year ended 31 December 2002 £'000	Year ended 31 December 2003 £'000
Turnover				2 (1)
Gross profit	(2.169)	(2.404)	(5.021)	1
Research and development	<u>(2,168)</u> —	<u>(3,404)</u> —	(5,021)	(5,369) (319)
Other administrative expenses	(1,288) (261)	(1,292) (940)	(2,782) (1,254)	(2,972) (1,254)
Share-based compensation	(1.540)	<u>(3,661)</u>	1,156	594
Administrative expenses	(1,549)	(5,893)	(2,880) 15	(3,951) 110
Operating loss	(3,717) <u>712</u>	(9,297) 684	(7,886) <u>764</u>	(9,209) <u>457</u>
Loss on ordinary activities before taxation  Tax on loss on ordinary activities	(3,005)	(8,613)	(7,122) 1,399	(8,752) <u>651</u>
Loss on ordinary activities after taxation, being retained loss for the financial period	(3,006)	(8,613)	(5,723)	(8,101)
	£	£	£	£
Basic and diluted	(0.06)	(0.12)	(0.07)	(0.10)

All results are from continuing operations.

The loss per share is based on the weighted average number of shares adjusted to reflect the restructuring of share capital on listing of the Company and is presented as if the share restructuring had happened at the beginning of the period under review.

#### PROSPECTS FOR THE GROUP

Since 31 December 2003, the Group has continued to fund its development programmes utilising existing cash resources, and had a cash balance of £8,453,569 million at 31 January 2004. The Directors are confident about the prospects of the Group for the current financial year. In the next 12 months, the Directors believe that the Group will complete the launch of Kerraboot® in the UK, commence sales of Kerraboot® in the US, complete the upgrade of its GMP manufacturing facility to US and EMEA cGMP standards, complete its toxicology studies for Cerepro<sup>TM</sup>, apply for EU Orphan Drug Status for Trinam® and secure the grant of the filed patent in the US for Kerraboot®. The Company also expects to obtain Phase II trial results for EG005 and to complete CE marking of its diagnostic testing kit (EG010) within the next year.

As the Group's development programmes progress, the Group's rate of expenditure will increase accordingly. Administrative expenses are expected to increase with the expansion of the Group's management team to support the increasing scale of operations as the Group's lead products move through late stage clinical development to planned marketing approval. Following the full launch of Kerraboot® in the UK, and the launch of Kerraboot® in the US, the Directors anticipate that the Group's sales revenues will increase. Sales and marketing expenses are also expected to increase rapidly for the foreseeable future to support these Kerraboot® launches and in preparation for the potential regulatory marketing approval of other products. See Part VII — "Management's Discussion and Analysis of Financial Condition and Results of Operations".

The Offer will raise new capital for Ark which, when combined with existing cash resources, is intended to enable the Group to continue the development and launch of its lead products to a stage where they can generate significant revenues for the Group. With existing cash resources, the funds to be raised through the Offer and anticipated revenues from sales of Kerraboot®, the Directors believe that the Group is well positioned to achieve its growth and development targets.

#### THE OFFER

The Offer comprises the offer of 41,413,996 New Ordinary Shares by the Company (representing approximately 33 per cent. of the enlarged issued share capital of the Company assuming no exercise of the Over-Allotment Option) and 142,000 Ordinary Shares by three Finnish Shareholders (which are being sold to enable these Finnish Shareholders to meet their Finnish tax liabilities which will crystallise upon Admission). In addition, the Company has granted Credit Suisse First Boston as stabilising manager the Over-Allotment Option, exercisable for a period of up to 30 days from Admission, which may require the Company to issue up to an additional 6,233,399 New Ordinary Shares at the Offer Price to cover over-allotments in connection with the Offer and to cover short positions resulting from stabilisation transactions, if any.

The Offer is being made by way of an offer to certain institutional investors in the UK, to QIBs in the United States in transactions exempt from the registration requirements of the Securities Act, and to certain institutional investors in the rest of the world. As part of the Offer, qualifying employees and their immediate family members will have the opportunity to subscribe for up to 21,931 of the New Ordinary Shares pursuant to the Employee Share Offer.

Under the Offer, which is fully underwritten by the Underwriters, all Ordinary Shares will be issued or sold at the Offer Price.

Admission is expected to take place and unconditional dealings in the Ordinary Shares are expected to commence on the London Stock Exchange on 8 March 2004. Prior to that time, it is expected that dealings in the Ordinary Shares will commence on a conditional basis on the London Stock Exchange on 3 March 2004. These dates may change. Dealings on the London Stock Exchange before Admission will only be settled if Admission takes place and will be for settlement three business days after Admission. All dealings before the commencement of unconditional dealings will be of no effect if Admission does not take place and such dealings will be at the sole risk of the parties concerned.

# SUMMARY OF RISK FACTORS

There are a number of risks that could materially and adversely affect the business, results of operations and financial condition of the Group and/or an investment in the Ordinary Shares, including risks and uncertainties with respect to: the commercial success of its products; access to funding in the future; required regulatory approvals; the success of clinical trials; the adequacy of Phase IV/corroborative studies; reliance on third party researchers, manufacturers, sales organisations and technology; protection of its proprietary technology; reliance on key personnel; competition; manufacturing facilities; market acceptance of its products; product reimbursement from third parties; managing growth of operations; product liability claims and insurance; environmental liabilities; exchange rate fluctuations; gene-based medicines; share price volatility; future sales of the Company's Ordinary Shares; and becoming a passive foreign investment company. Additional risks and uncertainties that the Group currently considers to be immaterial may also adversely affect its business. Prospective investors should read Part III — "Risk Factors", which sets out certain information that should be carefully considered before making any investment in the Company.

# PART II - INFORMATION ON THE GROUP

#### INTRODUCTION

Ark is an emerging healthcare group with one product introduced into hospitals and three further lead products in late stage clinical development. Capitalising on over ten years of research in vascular biology and gene-based medicine, Ark has created a balanced portfolio of proprietary healthcare products targeted at specific unmet clinical needs within vascular disease and cancer. These are large and growing markets, where opportunities exist for effective new products to generate significant revenues.

Ark's products are sourced from related but largely non-dependent technologies within the Group and have been selected to enable the Group to take each product through development within its own means and to benefit from Orphan Drug Status and/or Fast Track Designation, as appropriate. This strategy has allowed the Group to retain greater value and greater control of clinical development timelines, and to mitigate the risks of dependency on any one particular programme or development partner. Ark has secured patents or has patent applications pending for all its lead products in principal pharmaceutical markets. During development Ark retains the right to market its lead products in the key North American and European markets.

Ark, which has its origins in businesses established in the mid-1990s, was established in July 1997 by its three founding scientists, Professor John Martin, Dr Stephen Barker and Professor Seppo Ylä-Herttuala. Ark Therapeutics Limited acquired the Finnish company Oy Quattrogene Limited (now known as Ark Therapeutics Oy) in January 2001. Oy Quattrogene Limited was founded in October 1993 by Professor Seppo Ylä-Herttuala, Jukka Luoma, Timo Hiltunen and Merja Hiltunen. As part of a capital reorganisation, Ark Therapeutics Group Limited was inserted as the holding company of Ark Therapeutics Limited on 24 April 2002, re-registered as a public company and changed its name to Ark Therapeutics Group plc on 25 February 2004.

### **BUSINESS STRATEGY**

Address areas of clear unmet clinical need. There are a number of major areas of medicine, such as the treatment of high blood pressure, where products already exist that are effective in managing the majority of patients. Companies looking to introduce a new treatment into such an area would need to convince healthcare payers, physicians and/or patients of the superiority of their treatment over existing, well-known products.

Ark's strategy, on the other hand, is to focus on serious conditions, particularly within the growing markets of vascular disease and cancer, where effective treatments do not currently exist. The Directors believe that effective new products in these areas can generate significant revenues without the marketing costs associated with displacing existing established treatments.

Focus on specialist areas of medicine. Companies looking to develop new treatments for conditions that are treated by primary care physicians/GPs often need to carry out very large, expensive clinical trials to gain marketing approval. Following approval, these products generally are marketed by large sales forces because of the large number of physicians that need to be visited to promote them effectively. As a result, emerging healthcare companies looking to develop such products frequently secure pharmaceutical partners to assist in the development and commercialisation of their products.

In contrast, Ark's strategy is to focus on specialist areas of medicine where smaller, less expensive trials can be conducted and where commercialisation can be carried out with smaller sales forces because the number of physicians that need to be visited is considerably smaller. In particular, Ark looks to develop products where Orphan Drug Status and/or Fast Track Designation are available, since they afford the Group financial and/or regulatory benefits in developing products for market. In this way, Ark is able to finance its own development programmes and, potentially, market many of its own products without requiring assistance from pharmaceutical partners. The Directors believe that this allows the Group to retain control over its development programmes and maximise value. The Group will, however, contemplate co-promotion or licensing of its products once they have been approved, if this is to the commercial benefit of the Group.

Source world-class science and apply rigorous commercial screening at an early stage of development. Ark's world-renowned clinical and research expertise produces a wide-range of potential product candidates. Following screening of the merits of a potential product the Group carries out a detailed assessment of the potential market opportunity, likely competitive position and expected clinical trials requirements. Ark only commits its resources to those product candidates that fit its strategic focus, have identifiable likely competitive advantages and could be developed using the Group's own resources. The

Directors believe that this maximises the return to the Group from its investment in early stage research and development.

#### **KEY STRENGTHS**

Attractive portfolio including first product introduced into hospitals — Ark's portfolio includes three lead candidates in late stage trials and one product that was introduced into hospitals in the UK in November 2003 and in respect of which initial revenues have commenced. These are complemented by a strong follow-on portfolio of products and pre-clinical pipeline.

**Portfolio profile designed to mitigate risk** — Ark's portfolio incorporates a mix of high and low technology products and devices, from non-dependent scientific platforms, and spans early development to approved products. This limits the Group's exposure to an individual product setback or technology failure.

**Retained marketing rights** — Ark has avoided the need to secure development partners for its lead products thereby retaining commercial rights.

**Exceptional scientific base** — Ark's scientists are recognised as world-class in their fields of cardiovascular medicine and clinical gene-based medicine, giving the Group access to leading edge scientific discovery research. All of the Group's products stem from its research groups in vascular biology and gene-based medicines.

Management's ability to convert science into products — Ark's current portfolio has been built by a management team that has rigorously screened the innovations of its scientists and prioritised those specialist opportunities where a clear effective development path to market can be identified. Prior to joining the Group, Ark's management has taken key roles in the development and/or launch of more than 30 new drugs.

#### SCIENTIFIC BACKGROUND

Ark's founding scientists, Professor John Martin and Dr Stephen Barker of University College London (UCL) and Professor Seppo Ylä-Herttuala of the Al Virtanen Institute at the University of Kuopio, Finland, continue to play leading roles in the Group's research programmes. Professors Martin and Ylä-Herttuala have world-renowned expertise in cardiovascular medicine and clinical gene therapy respectively. Professor Martin holds the British Heart Foundation Chair at UCL, and was previously the head of cardiovascular research at Wellcome Laboratories. Both Professor Martin and Professor Ylä-Herttuala are involved in patient care as well as being acknowledged scientific researchers in their fields. The division of their time between patient involvement in clinical medicine and research and development enables them to identify unmet clinical needs and potential solutions, which, combined with Ark management's technology and development expertise, affords the Group a steady flow of possible opportunities through its product pipeline.

Ark has research groups in London and in Finland with complementary capabilities. These groups undertake research programmes which are interrelated in the overall process of product development.

**London** — The London-based group researches the biology of the vascular system and its diseases. This group has expertise in the science of the vascular endothelial growth factor (VEGF) family of genes and receptors and is exploring new drug applications within this programme via DNA, peptides and small molecule approaches. Trinam® and Kerraboot® both have their origins in this vascular growth factor programme.

Professor Martin's research unit at UCL was awarded £5.4 million in 2000 from the British Heart Foundation for investment in new facilities. This is the largest single award ever made by the British Heart Foundation.

**Finland** — The Finland-based group focuses on the area of gene-based medicine and the development of new vectors and delivery systems. The Group was also the first in the world to perform a clinical gene therapy trial involving an adenoviral vector in the cardiovascular system. The group also has considerable capabilities with *in vivo* disease models in the areas of cardiovascular disease and cancer. Cerepro<sup>TM</sup> was discovered and developed by the Finnish team.

In 2001, Professor Ylä-Herttuala's research unit at the University of Kuopio was designated a Centre of Excellence by the Finnish Government and as such was awarded a research grant of approximately €1.7 million payable over three years. In 2003 it was rated as one of the top three facilities in the world for cardiovascular gene medicine by an independent committee headed by the Chairman of the Nobel Prize Committee for Physiology and Medicine.

In addition to the Group's own scientific research, work relating to pre-clinical activities is also outsourced to contract research organisations, who perform such activities as toxicology, gene sequencing and biodistribution work (where appropriate to Good Laboratory Practice).

# **BUSINESS DEVELOPMENT AND PROSPECTS**

Set out below are details of Ark's lead products and follow-on product portfolio.

# LEAD PRODUCT PORTFOLIO

# Cerepro<sup>™</sup> — treatment for brain cancer (malignant glioma)

Cerepro<sup>™</sup> is a novel gene-based product for the treatment of patients with operable high grade glioma, a type of malignant brain tumour, given in addition to standard surgery and radiotherapy/chemotherapy. Cerepro<sup>™</sup> has completed two safety and efficacy studies, one of which could be considered as a pivotal study. These studies have demonstrated a consistently significant magnitude of effect, almost doubling mean survival time versus standard treatment (tumour removal plus radiotherapy and/or chemotherapy), on average by more than seven months. The Group is discussing its regulatory strategy with the EMEA, including the possibility of filing for regulatory approval using the safety and efficacy data obtained to date. In the US, the Group plans to hold discussions in 2004 with the FDA concerning its regulatory requirements.

### Clinical condition

Malignant glioma is a cancerous tumour that is confined to the brain and only rarely spreads further. The current standard therapy involves surgically removing the solid tumour mass and initiating radiotherapy and/or chemotherapy. Even when the solid tumour mass has been removed, pre-cancerous or isolated cancerous cells can exist in the brain in a significant number of patients. In the majority of these patients a new tumour grows and a repeat operation is frequently required. Currently available cancer medicines are generally very toxic and many do not readily reach the brain tumour. They often cause severe side effects that can reduce the patient's quality of life significantly and it is these side-effects that can often limit their use.

# Market opportunity

The prognosis for patients who are diagnosed with high grade glioma is very poor — with present treatment regimens most patients die within one year of diagnosis. Little therapeutic progress has been made in recent years, with licensed drugs extending life on average by just ten weeks when compared to standard treatment. Therefore, a high unmet clinical need exists for treatments to prolong life.

The Group's research indicates that there are currently approximately 38,000 cases of high grade glioma suitable for treatment with Cerepro<sup>™</sup> each year in Europe and the US. The price that Cerepro<sup>™</sup> could achieve if it is approved is difficult to estimate at this stage. However, a number of new biological products have been approved over recent years for serious unmet clinical need. Three of these products, Herceptin® and Rituxan<sup>™</sup> (for other types of cancer), and Tracleer<sup>™</sup> (for pulmonary hypertension), are currently priced within the range of approximately £10,000 and £20,000 per treatment.

# Mechanism of action

Cerepro<sup>™</sup> is comprised of a gene encased in a virus-like 'shell' (a "vector"). Vectors inject their gene 'payload' into target cells, a process known as transfection, which use this new genetic material as a blueprint for the production of new beneficial proteins.

Cerepro<sup>™</sup> uses a well-established adenoviral vector (ADS) to introduce the gene that causes cells to express a protein called thymidine kinase ("TK"). Following the standard surgery to remove the solid tumour mass, Cerepro<sup>™</sup> is injected through the wall of the cavity left behind by the surgical removal of the solid tumour, into the surrounding healthy brain tissue. In the following days, the healthy cells in the wall of the cavity express TK. Five days after surgery, the drug ganciclovir ("GCV") is given to the patient as part of the overall Cerepro<sup>™</sup> treatment regimen. Neither TK nor GCV is individually active but they react together to produce a substance which destroys cells, but only when they try to divide. Since rapid cell division is a key characteristic of cancer, cells that try to divide to form a new tumour around the site of the removal of the original tumour are targeted for destruction by the Cerepro<sup>™</sup> treatment.

Cerepro<sup>™</sup> thus works by harnessing healthy cells to produce the substances necessary ultimately to destroy newly growing cancer cells. This is in contrast to other historical gene-based approaches to treating cancer, where the cancer cells themselves are the targets for transfection of genes which then kill them. This historical approach is self-limiting, because as the cancer cells are killed, the treatment gene within them is

lost. In addition, to kill the complete cancer tumour these approaches need to achieve gene transfer in the majority, if not all, of the cancer cells. To date, the Directors are not aware of any trials that have demonstrated 100 per cent. target cell transfection, leaving many existing cancer cells unaffected by the treatment. Ark's novel use of healthy cells does not require high levels of transfection because cancer cell killing substances continue to be produced by these healthy cells even after the first new cancer cells are destroyed. Research has also shown that this effect is further amplified as healthy cells treated by a genebased medicine tend to pass their anti-cancer chemicals on to surrounding cells, the so-called "bystander effect".

#### Development status

Cerepro<sup>™</sup> has been granted Orphan Drug Status by the European Committee for Orphan Medicinal Products and by the Office of Orphan Products Development, FDA.

Following completion of a second safety and efficacy study, Ark has met with and received advice from the EMEA on the potential for filing in the EU for marketing approval under "exceptional circumstances" provisions and on a protocol design for a Phase IV corroborative study that would need to be undertaken if approval were given under these provisions. It has also agreed updates to the toxicology package and defined the manufacturing comparability and batch release tests for finished product. This work has now commenced.

Cerepro<sup>™</sup> is manufactured in the Group's facility in Kuopio, Finland, which was previously licensed by the Finnish National Agency for Medicines in 1998 and 2000 for the manufacture of injectable gene-based medicines for Phase I and II trials. Ark is working with the regulatory authorities to ensure its enlarged manufacturing facility meets US and European certification standards for Phase III/commercial gene medicine production. All manufacture has been, and the Group intends that all manufacture will be, performed in accordance with applicable European and US regulatory standards and guidelines.

Ark will continue discussions with the EMEA during 2004 and anticipates making a decision on its EU filing in late H2 2004 when the toxicology and manufacturing work is complete. Were the Group to seek approval under exceptional circumstances in the EU it could file in H2 2004; if not, the Group would file after concluding a further safety and efficacy study. The Group's existing business plan currently assumes a first filing for regulatory approval in H1 2007.

Ark will open discussion with the FDA in the US once all manufacturing, toxicology and factory work has been completed.

# Pre-clinical studies

Pre-clinical studies were conducted at the AI Virtanen Institute at the University of Kuopio in Finland. These *in vivo* studies assessed the safety and efficacy of HSV-tk gene therapy using a model which mimics the human situation.

Tumour regression was observed in two initial *in vivo* studies. Pre-clinical dose ranging work demonstrated that retroviruses were not effective *in vivo* at causing regression due to low transfection efficiencies and that a transfection level of 10 per cent. was needed to reduce tumour volume effectively and prolong survival time. In order to achieve such levels, an adenovirus was used for subsequent development.

No significant pathology was observed in toxicological studies in which three different routes of administration were used: intravenous injection, injection into the healthy brain tissue or intratumoural injection. The only immunological reactions observed were infiltration of inflammatory cells into the injection site when Cerepro™ was injected into the brain, or infiltration of inflammatory cells into the liver when Cerepro™ was injected intravenously. These findings are in line with findings from the extensive toxicology work with HSV-tk in an adenovival vector plus ganciclovir that are in the published literature.

# Clinical studies

Three clinical studies have been undertaken by the Group to support the Cerepro<sup>™</sup> programme and its use in the treatment of operable high grade gliomas. All studies were approved by the Ethics Committee of the University of Kuopio, the Finnish Board for Gene Technology and the Finnish National Agency for Medicines.

Study 901 (in 12 patients) examined the effectiveness of the vector in transferring a marker gene (*lacZ*) into human malignant gliomas. Results indicated that adenoviruses were more efficient than retroviruses in achieving gene transfer in humans and showed that no significant toxicity was associated with the highest dose of adenovirus used. It was determined that a transfection level of greater than 10 per cent, was needed in order for the product to be effective.

Study 902 (a controlled open label study on 21 patients, including seven historical controls) compared the safety and effectiveness of Cerepro<sup>TM</sup> with HSV-tk in a retrovirus-packaging cell line for the treatment of patients with operable primary or recurrent malignant glioma. The results demonstrated that the treatment was well tolerated, and the mean survival time of 15 months for the patients treated with Cerepro<sup>TM</sup> was almost double that of controls. The difference in survival time between the Cerepro<sup>TM</sup> and retroviral groups was statistically significant (p=0.012). The product was well tolerated with a good safety profile.

Study 903 (a randomised controlled study of 36 patients) further evaluated the safety and efficacy of Cerepro<sup>™</sup> in the treatment of patients with operable primary or recurrent malignant glioma. Study 903 demonstrated that with respect to the primary endpoint, reoperation free survival (RFS), treatment with Cerepro<sup>™</sup> resulted in an 81 per cent. increase in mean survival time from 39 to 71 weeks. The difference in survival time between the Cerepro<sup>™</sup> and control groups was highly significant (p=0.0095) and remained so when adjusted for prognostic factors for the disease (age, tumour type, histology, Karnofsky score). There was no evidence that those patients who were treated with Cerepro<sup>™</sup> and lived longer had any deterioration in their quality of life, nor did they have an increased dependency on concomitant drug maintenance treatment. The treatment was again well tolerated with a good safety profile.

Overall, in clinical studies to date, Cerepro<sup>TM</sup> has demonstrated a consistently significant magnitude of effect, almost doubling mean survival time versus standard treatment. On average, Cerepro<sup>TM</sup> extends life by more than seven months when compared to standard treatment. This extension of life is more than twice that reported for existing licensed products and represents a significant therapeutic advance in the treatment of high grade glioma.

# Competition

Although there are other drugs in development for this condition, little progress has been made in the treatment of high grade glioma in the last 20 years and the prognosis for patients remains poor. Many of the existing therapies used for patients with malignant glioma are frequently associated with debilitating and potentially fatal side effects.

# Vitor<sup>™</sup> — treatment for muscle wasting (cachexia) in cancer

Vitor<sup>™</sup> is an oral small molecule therapy for the treatment of muscle wasting (cachexia), a secondary, often fatal, condition commonly seen in patients with cancer. The active ingredient was originally developed as a treatment for high blood pressure and is currently marketed in Japan and certain countries in Europe. Vitor<sup>™</sup> is currently in Phase III clinical trials for cachexia in cancer and has been awarded Fast Track Designation by the FDA.

#### Clinical condition

Wasting involves the excessive breakdown of tissue without compensating growth or repair. Muscle wasting occurs frequently amongst patients with all types of solid tumours and also occurs in patients with other diseases including heart disease, liver cirrhosis and AIDS. In cancer, muscle wasting is often reported as the final cause of death.

# Market opportunity

It is estimated that between 40 and 90 per cent., depending on the type of cancer, of all cancer patients with solid tumours experience muscle wasting. It is prevalent particularly in the common cancers such as lung, pancreatic, stomach and colon cancer. It is estimated that there will be over three million new cases of cancer in Europe and the US in 2004 of which a large majority will involve solid tumours.

There are no pharmaceutical products currently approved specifically for the treatment of muscle wasting in cancer. The Directors believe it is possible, with appropriate development, that the product can be extended into other areas where muscle wasting also occurs, such as diseases in the lung and liver and AIDS.

### Mechanism of action

When patients develop cancer, chemicals called cytokines (e.g. IL-1- $\beta$ , IL-6, TNF- $\alpha$  and IFN- $\alpha$ ) are produced which interfere with the underlying energy production by the mitochondria within muscle cells. Breakdown of proteins (actin and myosin) in the muscle cells subsequently occurs as the muscles weaken and waste. This may be mediated at the cellular level by a natural hormone known as angiotensin II (Ang II). Ark has found that patients with muscle wasting exhibit abnormally high levels of Ang II. It was also found that infusing Ang II causes muscle wasting *in vivo*. Vitor<sup>TM</sup> is effective at reducing the production of Ang II at the tissue level. Whether or not mediated by the level of cellular Ang II level, Vitor<sup>TM</sup> counteracts the "poisoning" effects of cancer-associated cytokines by both increasing the ability of mitochondria to produce energy and stopping protein breakdown in the muscle cells.

The active ingredient of Vitor™ is currently used to control high blood pressure. However, it is especially fat-soluble and after administration rapidly moves from the blood to accumulate in muscle tissue. This property has enabled Ark to produce a new tablet formulation which can be given in smaller doses so as not to cause unwanted blood pressure falls whilst still offering the potential to produce beneficial effects via this accumulation in muscle tissue.

#### Development status

Ark has access to the Marketing Authorisation Application (MAA) of the original drug developer containing the safety, toxicology and efficacy studies which were required to approve the drug for its existing use in the treatment of high blood pressure. Consequently, Ark has proceeded directly to Phase III development of Vitor™ in cachexia in reliance on the results of these studies without carrying out other clinical trials in cachexia. This approach has proven acceptable to the FDA, the UK Medicine Authority (MHRA) and the Canadian authorities, and this has significantly shortened the development time for this product.

#### Pre-clinical studies

In vitro studies by Ark have shown that Vitor<sup>TM</sup> increases the ability of mitochondria to produce cellular energy and further *in vitro* studies in a model of muscle cells commissioned by Ark at Aston University in Birmingham have shown that Vitor<sup>TM</sup> blocks muscle protein (actin, myosin) degradation in the presence of precursors of Ang II.

In vivo studies (conducted by the originator) have shown that  $Vitor^{TM}$  prevents heart muscle hypertrophy, independent from its effect on blood pressure and that  $Vitor^{TM}$  reduces the production of Ang II in muscle and other tissues.

In vivo studies have demonstrated that artificially elevating the levels of Ang II will produce muscle wasting. An investigative study in humans has shown that Ang II levels in patients with cachexia have significantly elevated levels of Ang II in serum.

A proof of principle *in vivo* study commissioned by Ark using a human colon cancer cachexia model has shown that Vitor<sup>TM</sup> reduced cachexia by approximately 60 per cent. and prolonged survival.

#### Clinical studies

Ark has commenced a Phase III study of 160 patients in the US, Canada and the UK. To date the study has recruited approximately 60 patients. Two Drug Safety Monitoring Board (DSMB) meetings have taken place and no side effect issues of concern have arisen, and in particular there is no increased incidence of hypotension. Vitor™ has been awarded Fast Track Designation by the FDA. The Directors believe that if the results of the Phase III trial are sufficiently positive they could provide pivotal data on which to base an application for marketing authorisation in H1 2005 in Europe, where the active ingredient has previously been approved. The Group is advised that a second study may be necessary for approval in the US (where the active ingredient is not currently approved) and thus, depending on the requirement for a second study, the Directors expect the Group to file for US regulatory approval in 2007.

# Competition

There is currently no pharmaceutical treatment approved specifically for muscle wasting in cancer, to the best of the knowledge of the Directors. Corticosteroids, appetite stimulants and growth hormones have been

tried, but have failed to meet clinical needs and some have been associated with undesirable side effects. So far as the Directors are aware, other approaches in development have yet to demonstrate significant market potential.

## Trinam® — treatment to prevent blocking of blood vessels after surgery

Trinam® is a novel product consisting of a local delivery device and a gene-based medicine, being developed to prevent the blocking of veins and arteries that frequently occurs after vascular surgery. The initial target market is haemodialysis graft access surgery, a procedure in which patients whose kidneys have failed have a plastic tube grafted between blood vessels in their forearm so that their blood can be regularly filtered using a dialysis machine. Trinam® is currently in a Phase II trial, this being the first part of the Phase II/III study for which it has received approval from the US Recombinant DNA Advisory Committee (RAC).

## Clinical condition

After vascular surgery, an overgrowth of muscle cells can occur in the wall of the otherwise healthy blood vessels. Known as intimal hyperplasia, this is a significant problem as it can cause a complete blockage (*de novo* stenosis) of the blood vessel which usually results in the need for further surgery to avoid serious complications.

Patients who have kidney failure require their blood to be filtered through a dialysis machine to prevent them from dying. The process is normally carried out at least twice a week and involves the insertion of two needles into the patient — one to extract their blood and one to return it once it has been filtered. However, normal blood vessels cannot tolerate large needles being inserted into them repeatedly. One way to overcome this is to surgically insert a plastic tube between a vein and an artery in the patient's arm ("access graft"). Needles can then be repeatedly inserted into the graft to connect the patient to the dialysis machine.

Up to 60 per cent. of haemodialysis access grafts block within one year of being inserted due to *de novo* stenosis, so that repeat surgery must be performed. Such repeat surgery also frequently fails, but more rapidly as less suitable sites are used, and can only be performed a limited number of times. Alternative and more difficult routes to achieve filtration are then required. In these circumstances, the life expectancy of patients can be short.

# Market opportunity

The market need for Trinam® is to extend the useful life of access grafts, thus reducing the need for repeat operations and hospitalisation costs, and ultimately to increase the life expectancy of kidney failure patients who rely on haemodialysis to survive. There is no currently available therapy which reduces the failure rates of access graft procedures for haemodialysis patients and the clinical need is such that the US National Institute of Health has highlighted it as a priority requiring a solution in the Healthy People 2010 Directive.

In the US and Europe, approximately 111,000 access grafts for haemodialysis are fitted per annum. This includes both grafts for new patients undergoing haemodialysis and new grafts for the substantial proportion of those patients in which a previous graft has failed. In Europe, over 110,000 patients receive an alternative procedure to provide haemodialysis access each year, called an arteriovenous fistula (AVF), and these are also associated with a high failure rate following surgery. The Directors believe that a proportion of these patients could be expected to be treated with access grafts, were Trinam® to make a clinically relevant reduction in failure rates. The Directors estimate that the potential European and US market for Trinam® could be in excess of 150,000 cases per annum.

# Mechanism of action

Trinam® is a combination of a vascular endothelial growth factor (VEGF) gene packaged in an adenoviral vector (Ad 5) and a bio-degradable local drug delivery device made from collagen and invented by Ark. At the end of access graft surgery, the delivery device is fitted around the outside of the patient's vein where it has been joined to the access graft. The adenoviral vector carrying the VEGF gene is then injected into a space between the device and the blood vessel. This unique administration of the gene to the outside of the blood vessel rather than into the blood supply localises delivery of the gene to the target tissue site (smooth muscle cells) and reduces the risk of unwanted systemic effects. Once the VEGF gene is transfected locally, muscle cells in the vessel wall produce the VEGF protein which triggers the release of beneficial

nitric oxide and prostacyclin. Ark has made a novel discovery by showing that the VEGF protein working via these two agents has a protective effect *in vivo*, keeping blood vessel walls in a healthy state and regulating muscle cell growth to prevent blocking of the vessel.

#### Development status

Trinam® has received Orphan Drug Status in the US and the Group has commenced the application process for Orphan Drug Status in Europe. Ark has received approval from the RAC to conduct a Phase II/III trial in haemodialysis access surgery. The ascending dose Phase II stage of this trial in up to 20 patients is being conducted in the US at Duke University.

The adenoviral vector in Trinam® has already been used in approximately 640 patients by other biotechnology companies and academic institutions and its safety profile is well established. VEGF genes are already in pivotal studies in the US and to date have shown an acceptable safety profile.

#### Pre-clinical studies

The following pre-clinical studies have been performed:

An *in vivo* 'proof of principle' study showed that transfection of the VEGF gene from the outside of the blood vessel reduces blood vessel blockage (intimal hyperplasia).

An *in vivo* study was conducted to assess the comparative biodistribution of the gene and vector when administered with Ark's delivery device and when given intravenously. Administration using the collar device resulted in at least a ten-fold reduction in the distribution of the vector away from the site of administration.

In vivo studies investigated the viability and biodegradability of Ark's collar delivery device using various shapes and formulations of collagen. These studies led to the current specifications for the device

An *in vivo* study was undertaken to evaluate the effectiveness of a range of vector and VEGF gene combinations in reducing intimal hyperplasia. A particular adenoviral-VEGF gene construct was found to be most effective in achieving gene transfer.

In vivo studies to develop an in vivo model of intimal hyperplasia simulating haemodialysis access surgery were performed. In vivo development work has been undertaken to develop an in vivo graft model to complete the pre-clinical development and to undertake a definitive toxicology, biodistribution and efficacy study for Trinam<sup>®</sup>.

A definitive *in vivo* toxicology, gene expression and distribution study was conducted in a graft model. This study, designed under guidance from the FDA, established that treatment with Trinam® in the dose range which encompassed the proposed human dose appreciably increased the length of time it took for the grafts to block. Gene vector delivery was limited to the site of administration and biodistribution elsewhere was minimal and of no toxicological consequence.

#### Clinical studies

A Phase I study has been conducted where product feasibility, safety and arterial gene expression were investigated in the legs of patients prior to undergoing a scheduled amputation. A VEGF gene, a liposomal vector and the delivery device were studied in these patients. The gene medicine administration was well tolerated and demonstrated successful transfer of the gene into the outside of the blood vessel, for what the Directors believe to be the first time in humans, and localised expression of the VEGF protein in the target tissue. Since completing the Phase I study, the molecular biology of the VEGF family of genes has been elucidated. Ark has also performed further *in vivo* studies comparing several VEGF genes and a variety of vectors and has now moved to a different optimised VEGF gene and an adenoviral vector (Ad 5) combination to take through clinical development. A toxicology study has been performed in conjunction with the FDA to allow this transition to be effected.

Ark has received approval from the RAC to conduct a Phase II/III trial. The Group has received IND approval from the FDA for the ascending dose Phase II study in up to 20 patients, which is being conducted in the US at Duke University.

The Directors anticipate that an application for marketing authorisation in the EU and the US would occur in H1 2007 following a successful outcome of the clinical programme.

#### Competition

So far as the Directors are aware, no products are currently approved for the prevention of the blocking of blood vessels following haemodialysis access surgery. Other approaches using anti-thrombotics and cytokine inhibitors have yet to publish convincing positive data.

# Kerraboot® — wound dressing device

Kerraboot® is a novel wound dressing device for leg and foot ulcers. It has completed its clinical development, and has been CE marked in Europe and has been listed with the FDA, allowing it to be marketed in the US. Ark has recently introduced the product to hospitals in the UK and expects Kerraboot® to obtain Drug Tariff Approval in H1 2004, which will enable GPs to prescribe it. Kerraboot® is manufactured by Flexicare Medical Limited in the UK.

#### Clinical condition

Leg and foot ulcers generally present as open sores, and frequently become infected, causing a strong, unpleasant and embarrassing odour. They are difficult to heal and in the most severe cases can lead to amputation. They can be caused initially by local problems in blood vessels or nerve damage and they are frequently associated with patients who suffer from diabetes. Hospital treatment of the ulcer can include regular removal of surrounding hard skin build-up (callus) and often painful redressing of the ulcer by a trained healthcare professional up to three times a day. Community nurses perform this function for patients that have been discharged from hospital.

# Mechanism of action

Fluid from leg and foot ulcers, known as exudate, contains substances which inhibit natural growth factors (notably VEGF) from healing the wound. Kerraboot® works by soaking up and isolating the exudate, whilst maintaining a warm, moist and protected environment around the ulcer. This combination facilitates growth of healthy new blood vessels and tissue in the ulcer bed and limits the formation of calluses. Healthy new vascular tissue helps to fight infection and promotes healing of the skin.

# Market opportunity

There is a total market of 1.3 million diabetic and venous leg and foot ulcer sufferers in the US and Europe.

Ark is initially targeting the diabetic market and patients with venous ulcers who cannot tolerate the standard treatment of compression bandaging, of whom there are approximately 620,000 patients in the US and Europe. The venous leg ulcer market is twice as large as the diabetic market in terms of patient numbers, and there is an existing demand for better dressings in a significant proportion of cases. In the UK, up to 25 per cent. of district nurse time can be spent dressing leg and foot ulcer patients, and in US healthcare institutions significant labour costs are attributable to this activity. These ulcers therefore represent a significant cost burden to healthcare providers. Trial results have indicated that both healthcare workers and patients believe that Kerraboot® offers a significant benefit over current wound management approaches, which could lead to an increase in the value of the existing market.

# Product profile

Kerraboot® is marketed as a novel wound dressing device for the management of leg and foot ulcers, offering significant benefits in terms of savings of nurse time, less painful procedure on dressing changes and reduction of odour. In assessment programmes carried out by Ark, both patients and healthcare workers rated Kerraboot® significantly better than the previous dressings they had been used to. It was also considered easy to use and very convenient. By using Kerraboot®, it was shown that the time taken by the nurses to change the device was approximately 70 per cent. shorter than the time taken to change a conventional dressing, with some patients becoming more independent. Kerraboot® caused less pain on changing than conventional dressings and the need to remove calluses from around the ulcers was reduced. It largely eliminated the unpleasant odour from the ulcers. Favourable effects in terms of healing were demonstrated and, in particular, significant healing was seen in ulcers associated with diabetes. No significant adverse reactions relating to the product were observed.

#### Competition

There are a variety of products on the market designed for wound management, such as dressings, gels, ointments and anti-odour filters. The Directors are not aware of any comparable device on the market as a competitor to Kerraboot<sup>®</sup>, and the response from patients and healthcare workers to date indicates the product is fulfilling a number of unmet needs.

# FOLLOW-ON PRODUCT PORTFOLIO

### EG005 — treatment for lipodystrophy syndrome in HIV positive patients

EG005 is an oral therapy for the treatment of a fat metabolism disorder, known as the lipodystrophy syndrome, which affects HIV-positive patients receiving highly active anti-retroviral therapy ("HAART"). EG005 contains the same active ingredient and has similar fundamental biology to Vitor™, described previously.

### Clinical condition

Lipodystrophy syndrome is a distressing condition characterised by the loss of body fat on the face and limbs and its redistribution to the abdomen and back. There are also additional serious metabolic abnormalities that occur with the fat redistribution, notably changes in lipid, insulin and glucose metabolism associated with an increase in acid levels in the blood (lacticacidosis). This complication reaches serious levels and unpredictably causes death in a small number of patients.

#### Market opportunity

The majority of HIV-positive patients in the US and Europe are prescribed HAART. At the end of 2002 there were an estimated 940,000 patients who were HIV positive in North America and 540,000 in Europe, one quarter of which were unaware of their infection. 90 per cent. of those receiving treatment for HIV/AIDS were receiving HAART and, whilst it is difficult to quantify, the Directors believe that up to 80 per cent. of these display symptoms of lipodystrophy, giving a target market of up to 800,000 patients. So far as the Directors are aware, there are currently no approved treatments specifically for this disorder.

## Mechanism of action

Recent scientific evidence increasingly links the lipodystrophy syndrome to chemicals which cause the cells' energy generators (mitochondria) to malfunction. EG005 has been shown to increase the ability of mitochondria to produce energy and is believed to work by reducing cellular levels of Ang II as previously described for Vitor (see page 17). The Directors believe that, by stimulating energy production in the mitochondria, EG005 has the potential to be an effective treatment for the lipodystrophy syndrome. In this way, EG005 could improve the quality of life of HIV-positive patients and may help reduce lacticacidosis and prevent the associated cases of sudden death.

### Development status

## Pre-clinical studies

The pre-clinical data is identical to that described for Vitor™.

## Clinical studies

Ark has access to the MAA containing the full safety, toxicology and efficacy studies which were required to approve the active ingredient for its original use as a treatment for high blood pressure. Based on this data, the Group has designed and initiated two human studies.

The first investigative clinical study (40 patients) was designed to gain an understanding of any natural variance in the disorder between patients with different genetic make-ups and to investigate the relationship between Ang II serum levels and the condition. The results showed patients with lipodystrophy had double the Ang II levels that would normally be expected. There were no differences that were detected in relation to the genetic make-up of the patients.

A 50 patient Phase II study to explore initial human efficacy and safety has commenced. To date, over 35 patients have been recruited and no safety issues have arisen. Notably, the majority of patients completing the study have elected to enter an extension study.

Ark is currently planning a Phase III trial to provide pivotal data for a marketing application. The Directors anticipate that, depending on the outcome of these trials, filing for marketing approval in the EU could occur in 2006. Ark anticipates filing for Fast Track review during the trials process.

### Competition

So far as the Directors are aware, there are currently no approved treatments for the lipodystrophy syndrome in HIV-positive patients. Companies have been reported to be working on other drugs to affect mitochondrial function, but, to the knowledge of the Directors, there is no published data to date. Other approaches in development remain to be proven and include studies such as those with oral anti-diabetic agents, lipid-lowering agents and human growth hormones.

#### EG010 — diagnostic testing kit

EG010 is an *in vitro* diagnostic test which predicts the likelihood of a serious cardiac event (e.g. heart attack) occurring. It is anticipated that the product will, when completed, conform to the latest 'equivocal zone' requirements that allow doctors and patients to understand how much reliance can be placed on the results of a test, if any. Whilst a publication of results is not yet available, initial trials data indicate that it is an applicable predictive test in approximately 75 per cent. of patients.

#### Clinical condition

Patients who suffer heart attacks invariably have atherosclerosis. The presence of atherosclerosis does not automatically indicate a heart attack is imminent as the majority of males in the western world have some degree of atherosclerosis before the age of 40. Atherosclerotic tissue (plaque) can, however, become very biologically active and in this state a section of plaque can sometimes break off and block the coronary artery which is the main blood supply to the heart muscle, leading to a heart attack. Following rupture of the plaque oxidised-LDL (Ox-LDL), stored in the wall of the plaque, sets off an immunological reaction in the blood stream and antibodies are produced which are directed against the exposed Ox-LDL molecules. These antibodies can be measured in the laboratory. One particular form of antibody is known to be particularly associated with the risk of a heart attack. EG010 has been specifically developed and optimised to detect this antibody.

# Market opportunity

Ark envisages that this test could be used as part of the standard battery of tests currently used to screen adults for cardiac risk factors. Ark is yet fully to evaluate the potential of this opportunity.

# Development status

Ark has completed the necessary clinical validation work to achieve CE marking status in Europe. In this study of approximately 100 patients admitted to hospital with chest pain and subsequently fully diagnosed as having either suffered an acute heart attack or unstable angina, initial results show that EG010 tested positive in 88 per cent. of the former and 76 per cent. of the latter. Collectively, Ox-LDL predicted, according to initial trial data, 81 per cent. of patients with an acute coronary syndrome. This compared very favourably with C reactive protein testing (one of the current best-known predictors) which only predicted 29 per cent. Ark is currently finalising the finished product control standards and expects to complete CE marking during 2004. The Group will address the US position once it has obtained CE marking in Europe.

# Competition

There are a number of tests that are currently used to assess whether an individual is suffering from, or is likely to suffer from, some form of cardiac disease. However, the Directors believe that none of the existing tests offers the level of prediction of EG010.

# PRE-CLINICAL PIPELINE

Ark has access to certain discoveries made by Professors Martin and Ylä-Herttuala and their teams at, respectively, UCL and the University of Kuopio.

Intellectual property derived from research conducted by these groups is transferred to Ark as described in "Intellectual Property" below.

These relationships, with the long term rights to further intellectual property arising from the work of consultants of Ark based at UCL and from a team of researchers led by Professor Seppo Ylä-Herttuala at the University of Kuopio in Finland, give the Group access to discoveries that can be used in the selection of its future lead development candidates.

Ark's main pre-clinical programmes are described below.

## Gene-based medicines and vectors (Finland)

Ark has developed a drug targeting platform (Scavidin®) with *in vitro* and *in vivo* proof of principle, and a versatile vector programme based on baculovirus (BacV $^{TM}$ ). The Directors believe that, in addition to providing more flexible and safe vectors for gene-based medicines, BacV $^{TM}$  also has a functional genomics application which has the potential to operate at least ten times faster than current functional genomics platforms, allowing both gene function and small molecule targets to be identified.

# Vascular biology and growth factors (London)

Research carried out on behalf of Ark has identified a variety of novel therapeutic candidates, including the world's first known neuropilin 1 receptor antagonist (NP-1), a peptide with *in vivo* proof of principle and applications in cancer, occular disorders and nerve degeneration; a family of peptides with strong antiangiogenic properties and *in vivo* proof of principle and potential applications in cancer and eye disease; a small molecule VEGF mimetic for the prevention of atherosclerosis; and a new vascular genomics programme.

## MARKETING/COMMERCIALISATION OF PRODUCTS

Ark's strategy is to focus on specialist areas of medicine where commercialisation can be carried out with smaller sales forces because the number of physicians that need to be visited is considerably smaller than for conditions treated by primary care physicians/GPs. Depending on the product and market, Ark plans either to sell and market its products alone (through developing its own specialist sales force or using a third-party contract sales organisation) or to enter into co-promotion or other licensing arrangements with larger pharmaceutical or biotechnology firms for the sales and marketing of its products.

The following table sets out the Group's current plans for the commercialisation of its products:

Product	US	Europe	ROW/Japan
Cerepro™	Alone <sup>(1)</sup> or co-promote		Out-license
Vitor™	Alone <sup>(1)</sup> or co-promote with an established oncology/ palliative care company	Existing distributors of the Japanese originator have first option to promote in certain countries, otherwise alone <sup>(1)</sup> or co-promote	Out-license/Japanese originator
Trinam®	Alone <sup>(1)</sup> or investigate collaboration with major dialysis company		Out-license
Kerraboot®	Set up joint venture or co-promotion arrangement with existing US company	Alone <sup>(1)</sup> in UK and co-promote in rest of Europe	Out-license
EG005	Out-license/investigate potential sale		Out-license/Japanese originator
EG010	Out-license/investigate potential sale		Out-license/investigate potential sale

<sup>(1) &</sup>quot;Alone" means using the Group's own sales force (which has yet to be established) or a contract sales organisation.

Ark's current sales and marketing, of Kerraboot® in the UK, is being conducted by a small team of sales representatives and a sales manager employed by a third-party sales organisation.

#### MANUFACTURING STRATEGY AND FACILITIES

Ark's strategy is to manufacture its gene-based medicines (including Cerepro<sup>™</sup> and Trinam<sup>®</sup>) in-house and to outsource the production of its other products (including Vitor<sup>™</sup> and EG005) to third parties. Vitor<sup>™</sup> and EG005 for trials are currently manufactured under contract by Quintiles Limited in the UK. The Company will make arrangements with respect to commercial production nearer the time of commercialisation. There are a number of well-established contract manufacturing companies who are able to manufacture such products effectively for the Group. The manufacturing of Kerraboot<sup>®</sup> is currently being outsourced to Flexicare Medical Limited in the UK.

Ark has a GMP manufacturing facility in Kuopio, Finland with one suite (GMP1) operating at Biosafety level 3 and a second suite (GMP2) at Biosafety level 2. The facility enables the manufacturing of DNA plasmid, adenoviral, retroviral and lentiviral vectors for injection. In 1998 and 2000 the GMP1 suite was approved by the Finnish National Agency for Medicines for the manufacture of injectable gene-based medicines for Phase I and II trials. Ark has expanded the facility with the GMP2 suite and is preparing to upgrade these facilities to be compliant with FDA and EMEA cGMP factory requirements for phase III/commercial production of gene-based medicines. The facility received an inspection from the Finnish authorities in H2 2003 and is now working closely with the agency to complete all validation requirements necessary for certification. Once this upgrade has been completed, and Trinam® has been approved, Ark's manufacturing capability will also need to be increased by transferring production to bioreactors. Ark should then have the capacity to be self-sufficient for commercial production of its gene-based therapeutics.

#### INTELLECTUAL PROPERTY

The Directors believe that protection of the Group's intellectual property is fundamental to its product development and marketing strategy, and Ark actively seeks to protect its inventions using patents where appropriate.

Since its inception, Ark's intellectual property portfolio has grown considerably. It has filed 15 families of patent applications claiming inventions which have been generated by the Group's own scientists as well as through its agreements with its founding scientists and consultants at UCL and the University of Kuopio.

Ark's patent filings, made to protect its inventions, include the following:

- one family of patent applications claiming its gene therapy method of treating gliomas (Cerepro<sup>™</sup>).
   Patents in this family have been granted in the US and Australia, and applications are pending in Europe and other jurisdictions;
- two families of patent applications claiming its methods of treating muscle wasting (Vitor<sup>™</sup>) and lipodystrophy (EG005). Patents for Vitor<sup>™</sup> have been granted in Australia and China, the European application has been allowed and the Directors expect it to be granted soon, and applications are pending in the US and other jurisdictions. In addition, a PCT application is pending for EG005;
- two families of patent applications claiming its VEGF research programmes (which include Trinam®). A patent has been granted in Australia and applications are pending in Europe, the US and other jurisdictions;
- one family of patent applications in respect of the Kerraboot® device. Patents have been granted in Europe, Australia and Singapore, and applications are pending in the US and other jurisdictions;
- one family of patent applications claiming its cardiovascular risk diagnostic kit (EG010), pending in Europe, the US and other jurisdictions;
- one family of patent applications claiming its Scavidin® technology. An Australian patent has been granted and patent applications are pending in Europe, the US and other jurisdictions;
- four published families and one unpublished family of patent applications claiming its baculovirus gene delivery and genomics technology; and
- two families of patent applications relating to peptide technology of potential use in cancer therapy.

Further details of the Group's published patent filings are available in Part VI of this document, where its portfolio is discussed in detail in a report prepared by its patent attorneys, Gill Jennings & Every.

Intellectual property generated through research conducted by Professor John Martin's research unit at UCL and Professor Seppo Ylä-Herttuala's research unit at the University of Kuopio has been, and will continue to be, assigned to Ark under the terms of:

- · individual consultancy agreements signed with both professors;
- funded projects conducted by University of Kuopio research staff, which have been commissioned by Ark; and
- research conducted by Ark staff working in leased facilities within the two universities.

These relationships give the Group access to inventions for use in the selection of its future development candidates. Additionally, Ark has an option until 2007 to take a royalty-free, world-wide, exclusive licence from UCL Cruciform Limited of intellectual property arising from research conducted by Professor John Martin, Dr Stephen Barker and Professor Seppo Ylä-Herttuala in the field of gene therapy for cardiovascular disease in the course of a project conducted for UCL. This option has not been exercised but the Directors periodically review the technology to which it relates to determine whether it should be.

## LICENSING AND DEFERRED CONSIDERATION AGREEMENTS

Ark has entered into an agreement with Crucell Holland BV whereby it is licensed to use an adenoviral vector manufacturing cell line (PER.C6) for the research and development of Trinam<sup>®</sup>. Ark also has an option to take a non-exclusive, worldwide, commercial licence of this cell line for use in gene therapy, including in its adenoviral-based products such as Trinam<sup>®</sup>. Ark pays an annual fee to maintain this option, with a further payment due on exercise. If Ark exercises this option, it will pay an annual royalty based on net sales of any product comprising adenovirus which contains DNA from the licensed cell line, subject to an annual minimum payment.

Ark has an in-licensing agreement with the Ludwig Institute for Cancer Research and Helsinki University Licensing Ltd Oy relating to a VEGF gene for use in respect of stenosis. This licence envisages Ark performing certain clinical trials in a timely manner, and may be terminated if it does not, and attracts an annual renewal fee, as well as milestone payments during the development process and royalties based on net sales following product launch, subject to an annual minimum payment.

Ark has also taken a sub-licence from the Ludwig Institute of Chugai Seiyaku Kabushiki Kaisha's US patent application claiming the VEGF gene for use in the same field, with royalties payable on the same basis as under the VEGF gene licence described above.

In consideration of acquiring the patent rights to the Kerraboot® device, Ark has agreed to pay its inventor (Dr Stephen Barker) a portion of any lump sum payments received by Ark (up to a maximum of £100,000) in relation to products based on his invention, as well as royalties of up to 2 per cent. of net sales.

Ark has a commitment to pay BUPA Hospitals Limited a lump sum on commercialisation of products relating to the angiotensin renin system patents utilised in Vitor<sup>TM</sup>.

Ark has agreed that subject to the grant of patents for its Scavidin® technology, it will pay that technology's inventors a royalty based on Ark's net sales receipts of any Scavidin®-based products patented by Ark relating to therapies for cardiovascular disease based on delivery of genes, and other molecules with equivalent action, to the outside of blood vessels. Ark has also agreed to grant those inventors options to acquire ordinary shares on the grant of any such European, US or Japanese patent, as further detailed in paragraph 5.9 of Part X.

Ark has been granted an exclusive right by Tanabe Seiyaku Co. Ltd ("Tanabe") to exploit the active ingredient for Vitor™ in the US for cachexia and has reached agreement with Tanabe intended to facilitate the commercialisation of Vitor™ using that active ingredient in Europe. These arrangements would become non-exclusive if Ark develops or sells any similar class of agent.

# DIRECTORS AND SENIOR MANAGEMENT

#### Directors

Dennis Michael John Turner, MBA, Non-executive Chairman

Dennis Turner, aged 61, joined the Group as Non-executive Chairman in 1999. He played a key role in the early development of IMS International (NYSE:RX), a leading provider of information services to the pharmaceutical industry and co-founded SMS International, a pioneer in hospital automation. Most of his career has been spent creating, financing and developing companies in the medical and pharmaceutical

sectors. He was a co-founder, Chairman and Chief Executive Officer of Pharmaceutical Marketing Services Inc. (NASDAQ) and Walsh International Inc. (NASDAQ), providing technology and services to the pharmaceutical and healthcare markets. He was a director of International Biotechnology Trust plc from inception until 2001. He remains a director of a number of private technology and healthcare related companies.

# Dr Nigel Richard Parker, PhD, Chief Executive Officer

Dr Nigel Parker, aged 50, has been Chief Executive Officer of Ark since 1997. He has built and steered the Group from one intellectual property filing of early stage pre-clinical science into its current stage of development, recruiting the key senior executive staff, executing two rounds of private equity funding totalling almost £30 million and the acquisition of Oy Quattrogene. Since 1997 he has been responsible for the strategy and commercial focus of the Group. Throughout his career, he has played a key role in establishing and developing pharmaceutical and healthcare related companies. He was one of the original management team of Walsh International Inc. (NASDAQ), a company that provided software and information services to the pharmaceutical industry, is a former European Vice President of Teva Pharmaceuticals Ltd and is a former European Vice President and corporate officer of Pharmaceutical Marketing Services Inc. (NASDAQ). He has over 20 years' experience in the international pharmaceutical business.

# Martyn Douglas Williams, MA, FCA, Chief Financial Officer

Martyn Williams, aged 52, has been Chief Financial Officer of Ark since 1998. Prior to that he was the Chief Financial Officer of Walsh International Inc. (NASDAQ), joining as Chief Accounting Officer in 1988. As CFO in April 1996, he was a key member of the team responsible for the completion of the initial public offering of the company on NASDAQ. He has over 20 years' experience in senior financial positions in international business and is a member of The Institute of Chartered Accountants in England and Wales.

Professor Seppo Pasi Antero Ylä-Herttuala, MD, PhD, FESC, Consultant Director of Molecular Medicine and Non-executive Director

Professor Seppo Ylä-Herttuala, aged 47, was one of Ark's co-founders in 1997. Since 1995, he has developed the University of Kuopio's Gene Therapy Unit which is one of the most active centres in Europe, with experience in ten human gene therapy trials to date. In 1995, he became Professor of Molecular Medicine at the University of Kuopio with an appointment at the AI Virtanen Institute of Molecular Sciences at the University of Kuopio, Faculty of Medicine. As a world-renowned expert in gene expression technology and the pathogenesis of vascular diseases, he brings invaluable knowledge to the Group. His experience includes pioneering work in vascular gene therapy, where he performed the first adenoviral gene transfers to human peripheral arteries. He has also undertaken gene transfer to human coronary arteries and cancer gene therapy in gliomas using a genetically modified adenoviral vector. He is a member of the editorial boards of the journals "Atherosclerosis" and "Human Gene Therapy". Professor Ylä-Herttuala has also worked at the University of California, San Diego and has an MD and PhD from the University of Tampere, Finland.

# Peter Stephen Keen, Non-executive Director

Peter Keen, aged 46 was until February 2003 UK Managing Director of Merlin Biosciences Limited and Managing Director of Merlin Ventures Limited at the time it co-founded Ark in 1997. He is a Chartered Accountant who prior to co-founding Merlin in 1996 gained over 12 years' experience of financial management in biotechnology companies. He was Finance Director and Company Secretary of Chiroscience Group plc, which he co-founded and led the flotation of on the London Stock Exchange in February 1994. He is an experienced non-executive director and has held board positions in a number of investee companies of the Merlin Fund LP and the Merlin Biosciences Fund LP.

He acts as a non-executive director of the Finsbury Life Sciences Investment Trust plc, Microscience Ltd, Arakis Ltd and Vectura Ltd. In addition he is a director of Spectrum General Partner Ltd, general partner of the Rainbow Seed Fund, which provides seed capital to commercialise the outcomes of science research at a number of publicly funded organisations. He is an adviser to two UK University "Challenge Funds" and a member of the British Venture Capital Association's Technology Committee.

Sir Mark Henry Richmond, Non-executive Director and Senior Independent Director

Sir Mark Richmond, aged 73, was formerly Group Head of Research at Glaxo Group plc. He currently holds a number of non-executive board posts. He is a non-executive director of Genentech Inc., Cytos AG, Targeted Genetics, Inc., Paratek Pharmaceuticals Inc. and Sosei Limited.

Dr Wolfgang Plischke, Non-executive Director

Dr Wolfgang Plischke, aged 52, is a member of the Bayer HealthCare Executive Committee and President of the Global Pharmaceuticals Division of Bayer. He joined the Board of the Company in December 2003.

Dr Plischke studied biology at Hohenheim University and started his career in 1980 with Bayer's subsidiary, Miles Diagnostics. In 1988, he was placed in charge of marketing in the Pharmaceutical Business Group in Germany and in 1991 he was appointed to head International Strategic Marketing. In 1995, he became Managing Director of Bayer Yakuhin Ltd., Japan, with responsibility for Pharmaceuticals and Consumer Care and, in 2000, was appointed head of the Pharmaceuticals Business Group in North America. In January 2002, he was promoted to his current position as head of Bayer's Global Pharmaceuticals Division.

# Senior Management

Dr Alan Boyd, Director of Research and Development

Dr Alan Boyd, aged 49, has been the Director of Development for Ark since 1999. At Ark he has been responsible throughout the period covered by the Accountants' Report at Part VIII for the progression of all products from research, through the development process to achieve registration and launch. He is an acknowledged pharmaceutical physician and expert in all phases of drug development across a number of therapeutic areas. He began his pharmaceutical career in 1984 when he worked for Glaxo Group Research Limited as a clinical pharmacologist, focusing on the earlier stages of drug development. From 1988 he led the ICI cardiovascular medical research team, contributing to the development and commercialisation of several cardiovascular products. He was also Director of Clinical and Medical Affairs at ICI Pharma, Canada. In 1995, he became Head of Medical Research for Zeneca Pharmaceuticals and was responsible for the medical development of their products. Dr Alan Boyd is a graduate in Biochemistry and Medicine from the University of Birmingham. In 1996, he was elected a fellow of the Faculty of Pharmaceutical Medicine, Royal College of Physicians in recognition of his expertise in medicine development and in 2003 was elected to serve as a board member of the Faculty.

# Paul Higham, Director of Commercial Development

Paul Higham, aged 41, has been the Director of Commercial Development for Ark since 2001 and has extensive national and international commercial experience in the pharmaceutical industry. He worked as General Manager of Bayer (Pharmaceuticals), Sweden and Denmark, and as International Commercial Director for GI, Metabolic and Pain at GlaxoWellcome plc where he covered all aspects of business development, marketing and sales in the pharmaceutical industry. He has successfully launched and developed significant brands in the UK, Germany and Sweden and has helped create major pharmaceutical products by shaping research, development and commercialisation plans in a wide range of therapies including cardiovascular, metabolic, anti-infectives and gastrointestinal.

#### Co-founders

Professor John Martin, MB, ChB, MD, FRCP, FESC, F MEDSci, Chief Scientific Officer

Professor John Martin, aged 60, is Chief Scientific Officer at Ark and was one of Ark's co-founders in 1997. He is a practising cardiovascular physician and is world-renowned in the field of cardiovascular biology. He has over 25 years' experience in academic research in this area and has been involved in related industry work for ten of those. From 1986 to 1996, he was Head of Pharmacology and Head of Cardiovascular Research at the Wellcome Research Laboratories, and at the same time held a clinical and academic research post at King's College School of Medicine. He now holds a British Heart Foundation chair at UCL. He was appointed as Vice President of the European Society of Cardiology in 2001. From 1999 to 2001, he was responsible for the 24 scientific working groups of the Society. He is a member of the Home Office Animal Procedures Committee. He has been chairman of the Expert Cardiovascular Committee in DG XII at the European Commission. He has published over 200 research papers and recently received a

grant of £5.4 million from the British Heart Foundation to invest in research at UCL. He is an editorial member of the journal "Circulation". He is a former President of the European Society for Clinical Investigation.

Dr Stephen Barker, MS, FRCS, Consultant Surgeon

Dr Stephen Barker, aged 44, one of Ark's co-founders, advises the Group on the development of products related to vascular disease. He undertook his basic medical training at St Thomas' Hospital, London, where he gained his FRCS. He subsequently focused on a career in vascular surgery, tutored by Sir Norman Browse — President of the Royal College of Surgeons of England and Mr John Dawson — Sergeant Surgeon to Her Majesty Queen Elizabeth II.

He was appointed Senior Registrar at the Royal Adelaide Hospital, South Australia in 1993 where he undertook complex aortic and carotid surgery, re-operative vascular procedures and, of particular note, gained extensive exposure to haemodialysis vascular access surgery.

In 1996 he was appointed Senior Lecturer in Surgery at University College London and consultant vascular and general surgeon to University College London Hospitals NHS Trust.

#### SCIENTIFIC ADVISORY BOARD

Ark has established an advisory board of physicians and scientists to advise it on scientific and technical matters relating to the business. The scientific advisory board meets twice a year or more frequently by request. Its members include:

Dr John Gordon, BSc, PhD, ScD, Chairman — Dr Gordon is currently Chairman of Quercus Management Limited, Oxford; Manchester Innovation Limited; and Nurin Limited, Southampton. He was previously a main board director of British Biotech plc, PowderJect Pharmaceuticals Plc and PathoGenesis Corporation, and he has served as a director of many unquoted biotechnology companies. Dr Gordon has held a number of academic posts, including Head of Vascular Biology at the MRC Clinical Research Centre, membership of the Steering Committee for the International Society of Applied Cardiovascular Biology, Chairman of the European Vascular Biology Association and President of the British Society of Haemostasis and Thrombosis. He was for many years a Fellow of Corpus Christi College, Cambridge and has acted in a consultancy capacity to various departments at the University of Oxford.

Professor Göran R Hansson, MD, PhD, Vice Chairman — Professor Hansson is currently Professor of Cardiovascular Research at the centre for Molecular Medicine, The Karolnska Institute, Stockholm, Sweden and an Adjunct member of the Nobel Committee for Physiology and Medicine.

Professor Anthony D Dyan, MD FRCP, FRCPath, FFPM, FFOM — Professor Dyan is now Emeritus Professor of Toxicology, University of London, and has an extensive international consulting practice in pharmaceutical, biotechnological and industrial toxicology. He has served on the UK Medicines Control Agency and is currently a member of the UK Government-appointed authority with responsibility for oversight of gene therapy clinical trials, the Gene Therapy Advisory Committee.

Professor Peter L Weissberg, MD, FRCP (Lond), FRCP (Ed), FESC — Professor Weissberg is the British Heart Foundation Professor of Cardiovascular Medicine at the University of Cambridge and consultant cardiologist at Addenbrooke's Hospital, Cambridge.

Dr John Fromson, BSc, PhD — Dr Fromson has worked for over 30 years in the pharmaceutical industry, primarily in the area of drug development. Formerly Research Director of Hoechst Pharmaceuticals in the UK, and founder of Vanguard Medica, Dr Fromson is currently Chief Scientific Officer of Devco Pharmaceuticals Ltd, a virtual drug development company which he co-founded in 1998.

Mr Bruce Mackler, BA, MS, PhD, JD — Mr Mackler has a first degree in law and a PhD in Immunology/Microbiology. He has 24 years' experience in the area of drug registration with the FDA. A member of US state and federal bars, his experience covers a wide variety of medical product applications to the FDA, including Orphan Drug Status Applications, NDA, ANDA, BLA and 510k applications. He currently acts in a consultancy capacity for the healthcare industry, advising on FDA legal and regulatory issues.

#### **EMPLOYEES AND CONSULTANTS**

The staff breakdown by function at 2 March 2004 was as follows:

	Total	Employees	contract research
Research — UK	15	4	11
Research and Manufacturing — Finland	55	39	16
Development		7	2
Finance and Administration <sup>(1)</sup>	11	11	0
	90	61	<del>29</del>

<sup>(1)</sup> Excludes Non-executive Directors

Professors Martin and Ylä-Herttuala each have long-term consultancy agreements (as summarised in paragraph 10 of Part X) with Ark which are further reinforced through agreements signed with UCL and the University of Kuopio. Dr Stephen Barker is subject to the terms of a consulting agreement as described in paragraph 10.8(b) of Part X. As founding members of the Group, they are all Shareholders (as is UCL) and have been responsible for the research activities of the Group since inception. The Directors, Dr. Alan Boyd and Paul Higham are subject to service agreements or letters of appointment. On this basis, the Group expects all to the people listed in this paragraph to remain available to the Group for the foreseeable future.

Overall, Ark has a research group of approximately 75 scientists and practising clinicians, with its biologists, chemists and development teams based in London, and its gene science and vector technology teams based in Kuopio, Finland.

### **SHARE OPTIONS**

Directors and employees have been granted share options under the Ark Share Option Plans. Ark believes that performance based share incentives are the best means to motivate and retain the best calibre people whilst aligning their interest with those of shareholders. Following Admission, Executive Directors and employees will be eligible to participate in the Ark Executive Option Plans, the terms of which are summarised in paragraph 7 of Part X of this document. Non-Executive Directors will also receive share option awards as part of their remuneration package. Following the Capital Reorganisation appropriate adjustments will be made to the number of shares and the exercise price of options granted prior to Admission.

### CORPORATE GOVERNANCE

The Directors support high standards of corporate governance and believe that the Company is in compliance with the Combined Code. This section identifies areas where compliance may appear to be in doubt and sets out the reasons why the board nevertheless considers that Ark is in compliance with the Combined Code. The Combined Code currently recommends that the board of directors of a UK public company should include a balance of executive and non-executive directors, (and in particular independent non-executive directors) such that no individual or small group of individuals can dominate the board's decision taking. The Combined Code recommends that non-executives should comprise at least half of the board. The Combined Code further recommends that a majority of non-executive directors should be independent and that there should be a senior independent director. The Combined Code also provides that the remuneration committees of UK public companies should consist exclusively of non-executive directors who are independent. The Company complies with the Combined Code in these respects and has put in place the required procedures to comply where practicable with the internal control aspects of the Combined Code.

Currently, the Board is composed of seven members of whom five are Non-executive Directors. No individual or small group will be in a position to dominate the Board's decision taking. The Combined Code now includes more guidance on whether a director can be viewed as independent. In particular, the Combined Code provides that the board should determine whether the director is independent in character and judgement and whether there are any relationships or circumstances which are likely to affect, or could appear to affect, the directors' judgement. In compliance with the Combined Code, the Board has determined that the individuals listed below are independent, despite the existence of the relationships and circumstances detailed below and therefore that the majority of Non-executive Directors are independent. The reasons for the Board arriving at its decision are set out below in respect of the relevant Non-executive Directors.

The board has determined that Dennis Turner, Sir Mark Richmond and Dr Wolfgang Plischke are independent.

Sir Mark Richmond provides ad hoc consultancy services to Nomura International plc for at least ten days a year. The Directors do not consider this arrangement compromises his independence because Sir Mark Richmond is an eminent and experienced professional and board member who serves on a number of boards in addition to Ark. The consultancy with Nomura is not related to his role in Ark and he has not at any time represented Nomura on the Ark board. The Board considers that neither the terms of the consultancy nor the fees payable thereunder will in any way affect Sir Mark Richmond's independent judgement.

Dr Wolfgang Plischke was appointed as Nomura's nominee Director in November 2003. Beyond Admission, Dr Plischke will cease to be paid by Nomura for his services as nominee Director and will have no responsibilities to Nomura in respect of Ark. It is envisaged that Dr Plischke will provide advisory services to Nomura not related to Ark beyond Admission. Dr Plischke is Chairman of the board of management of Bayer Healthcare AG, a leading international pharmaceutical company, who was invited to join the Ark board because of his extensive international experience and stature in the industry. The Directors believe that as an experienced senior professional, the time spent advising Nomura in the future and the associated fees, and the brief period during which he represented Nomura as Ark prepared to go public, are not material to his future role with Ark and will not affect his independent judgement. The Directors further believe that his employment with Bayer as a senior executive will bring valuable objective expertise to the Company and is not likely to compromise his independence.

The senior independent director is Sir Mark Richmond,

Ark intends to appoint two additional independent Non-executive Directors to the Board. Ark is currently looking for suitable candidates although no individual has yet been identified.

In order to assist in securing the recruitment and retention of high calibre Non-executive Directors with the appropriate experience in the context of Ark's current stage of international development, it is the current policy of the Company to remunerate Non-executive Directors in the form of options to acquire shares in the Company, in addition to fees. Options granted to Non-executive Directors are not subject to any performance conditions and the number of shares which may be acquired on the exercise of an option is solely dependent on the Non-executive Director's period of service with the Company. The details of the options so granted are set out in paragraphs 7.4 and 9.2 of Part X of this document. The Board considers that the terms of the options will not in any way affect the independent judgement of Dennis Turner, Sir Mark Richmond and Dr Wolfgang Plischke or of any additional independent director to be appointed in the future.

Each Director has one vote. Resolutions are adopted by majority vote of those present and, if the votes are equal, the chairman of the meeting has a second, or deciding, vote. In accordance with the Company's articles of association, no Director shall vote or count in the quorum in relation to a resolution or a meeting of the Directors in respect of any contract or arrangement or other proposal whatsoever in which he has an interest which (together with any interest of a connected person) to his knowledge is a material interest.

The Board has established an Audit Committee, a Remuneration Committee and a Nomination Committee whose make-up complies with the requirements of the Combined Code. Ark expects that the Board will meet at least six times per year and may meet at other times at the request of any Director.

The Combined Code recommends that the Board should establish an Audit Committee of at least three independent Non-executive Directors, one of whom has recent and relevant financial experience and Ark complies with these requirements. One of the two directors being sought will have the requisite experience and will be appointed as Chair of the Audit Committee. Until that time Dennis Turner will chair the Committee. There is no restriction in the Combined Code against the chairman of the board also chairing the Audit Committee and so this will not constitute a derogation from the Combined Code. However, the Smith Guidance and ICSA terms of reference provide that the chairman of the board should not be a member of the Audit Committee and Ark intends to comply with this guidance as soon as possible. The Board believes Dennis Turner's short tenure both as a member of the Audit Committee and Chairman of the Board is a temporary situation until a new independent Non-executive Director with relevant experience can be appointed. Only independent Non-executive Directors may serve on the Audit Committee and so, in compliance with the Combined Code, the Audit Committee's other members are Dr Wolfgang Plischke and Sir Mark Richmond. The Audit Committee normally meets not less than three times a year and will meet the internal and external auditors at least twice a year without the executive Directors present.

The Audit Committee is responsible for making recommendations to the Board on the appointment of the external auditors and their remuneration. The Audit Committee considers the nature, scope and results of the auditors' work and will review (and reserves the right to approve) any non-audit services that are to be provided by the external auditors. It receives and reviews reports from management and the Group's auditors relating to the Group's annual report and accounts. The Audit Committee focuses particularly on compliance with legal requirements, accounting standards and the Listing Rules and ensuring that an effective system of internal financial and non-financial controls is maintained. The ultimate responsibility for reviewing and approving the annual report and accounts remains with the Board.

The Combined Code requires that the Remuneration Committee consist of at least two independent non-executive directors, in the case of a smaller company such as Ark. Sir Mark Richmond chairs the Remuneration Committee, and its other member is Dennis Turner. The additional independent Non-executive Director not appointed to the Audit Committee will, once appointed to the Board, become the chairperson of the Remuneration Committee. In compliance with the Combined Code, only independent Non-executive Directors of Ark serve on the Remuneration Committee. The Remuneration Committee, which normally meets at least twice a year, has responsibility for making recommendations to the Board on Ark's policy on the remuneration of senior executives, for reviewing the performance of executive Directors and senior management of Ark and for determining, within agreed terms of reference, specific remuneration packages for each of the Directors and members of senior management, including pension rights, any compensation payments and the implementation of executive incentive schemes.

Sir Mark Richmond chairs the Nomination Committee, and its other members are Dennis Turner and Dr Nigel Parker. Following the appointment of the two additional independent Non-executive Directors to the Board, at least one of them will become a member of the Nomination Committee. In compliance with the Combined Code, the majority of the members of the Nomination Committee are Non-executive Directors and the chairman of the Nomination Committee is the senior independent Non-executive Director. The Nomination Committee, which normally meets not less than once a year, has responsibility for considering the size, structure and composition of the board, retirements and appointments of additional and replacement directors and making appropriate recommendations to the Board.

In accordance with the requirements of the Combined Code, the identity of each chairman and the membership of the committees referred to above, and of the board of Ark itself, will be reviewed on an annual basis.

# **DIVIDENDS**

Ark is seeking primarily to achieve capital growth for its Shareholders. It is the Board's intention during the current phase of the Group's development to retain any future distributable profits for use within the business. Thereafter, subject to the availability of distributable reserves, the Directors intend to pursue a dividend policy reflecting the Group's growth in earnings and cash flow generated from operations, whilst maintaining an appropriate level of dividend cover and having regard to further development of the Group's activities. The Directors do not anticipate declaring any dividends for the forseeable future.

#### PART III — RISK FACTORS

Prospective investors should be aware that an investment in the Company involves a higher than normal degree of risk. In addition to the other information contained in this document, the following risk factors should be considered carefully in evaluating whether to make an investment in the Company and, in particular, should be read in conjunction with the Experts' Report in Part V of this document and the Patent Attorneys' report in Part VI of this document, which also highlight certain risk factors as well as giving other information on the Company, and the Group's consolidated financial statements in Part VIII. If any of the risks described in these Listing Particulars actually occurs, the Group may not be able to conduct its business as currently planned and its financial condition, operating results and cash flows could be seriously harmed. In that case, the market price of the Company's Ordinary Shares could decline, and all or part of an investment in the Company's Ordinary Shares could be lost.

# RISKS RELATED TO ARK'S BUSINESS

# Ark's products are at varying stages of development and it may never have a product that is commercially successful.

Ark has one approved product, Kerraboot®, which it introduced to hospitals in the United Kingdom in November 2003, and three further lead products in late-stage clinical development. Ark has not generated any revenues since inception, other than limited revenues in 2003 attributable to Kerraboot®. Whilst well progressed, the Group's three unapproved lead products in late-stage clinical development will require additional clinical evaluation, regulatory review, significant marketing efforts and substantial investment before they could provide the Group with any significant revenues. Due to the inherent risk in the development of pharmaceuticals, it is probable that not all of the product candidates in Ark's portfolio will successfully complete development and be launched. There can be no assurances that any of Ark's products will be commercially successful, for a number of reasons, including:

- the products may not prove to be safe and effective in clinical study programmes;
- Ark may not be able to obtain regulatory approvals for its unapproved products or approvals may be narrower than sought or take longer than anticipated;
- Ark may not be able to secure and maintain intellectual property protection for its products and challenges may be made to its intellectual property;
- competitors may develop more attractive alternative products;
- additional development costs and expenses may be incurred, over and above those expected by the Directors, and Ark may not have adequate financial or other resources to complete the development and commercialisation of its products; and
- any products that are approved may not be accepted in the marketplace.

With the exception of Kerraboot®, the Directors do not expect to be able to market any of the Group's lead products for a number of years. If the Group is unable to develop, receive approval for, obtain necessary patents or successfully commercialise one or more of its products, it may be unable to generate significant revenues. If its development programmes are delayed, the Group may need to raise additional funds or reduce or cease its operations.

Furthermore, there can be no assurance that the Group's portfolio of pre-clinical development programmes will succeed in developing additional products which it will be able to commercialise successfully.

# Ark has a history of operating losses and an accumulated deficit and may never become profitable.

Ark has experienced operating losses in each year since its inception with retained losses of £5.7 million for the 12 months ended 31 December 2002 and £8.1 million for the 12 months ended 31 December 2003. As at 31 December 2003, Ark had an accumulated deficit of approximately £27.8 million. Ark expects to incur further substantial operating losses in the current and future financial years as its research and development activities continue. There can be no assurance that Ark will ever earn significant revenues or achieve profitability, which could impair the Group's ability to sustain operations or obtain any required additional funds and could result in investors' losing all or a part of their investment in the Ordinary Shares.

Ark may require access to additional funding in the future, and if the Company fails to obtain such funding, the Group may need to delay, scale back or eliminate the development and commercialisation of some of its products or research and development programmes.

The amount and timing of any expenditures needed to implement the Group's development and commercialisation programmes will depend on numerous factors, some of which are outside Ark's control. Additional funds may be necessary due to a number of factors, which could include:

- · higher costs and slower progress than expected to develop products or obtain regulatory approvals;
- lower revenues than expected from commercialised products;
- unexpected opportunities to develop additional promising product candidates or to acquire technologies or other businesses;
- costs incurred to file, enforce or protect patents or other intellectual property rights; and
- costs incurred to sustain technological and market developments, scale-up manufacturing and effectively commercialise the Group's products.

The Group is currently not generating sufficient revenues to finance its research, development and commercialisation programmes and other operations, and there can be no assurance that it will do so in the future. If the proceeds of the Offer, together with future revenues, are not sufficient to finance the Group's research, development and commercialisation programmes, additional funds would be required. There can be no assurance that additional funds will be available on a timely basis, on favourable terms, or at all, or that such funds, if raised, would be sufficient to enable the Group to continue to implement its business strategy. If Ark is unable to raise additional funds through equity or debt financing, it may need to delay, scale back or eliminate expenditures for some of its research, development and commercialisation programmes, or grant rights to develop and market products that it would otherwise prefer to develop and market itself, thereby reducing their ultimate value to the Group. The Group's inability to obtain additional funds necessary to operate its business could materially and adversely affect the market price of the Ordinary Shares and all or part of an investment in the Ordinary Shares could be lost. In addition, to the extent the Company raises capital by issuing additional shares, shareholders' equity interests would be diluted.

# Regulatory approval of Ark's unapproved products and activities may be delayed, not obtained or, in the case of approved products and activities, not maintained.

The clinical evaluation, manufacture and marketing of Ark's products and its ongoing research and development activities are subject to regulation by regulatory and governmental authorities in all territories in which Ark, or any of its partners or licensees, wishes to test, manufacture or market products. The regulatory approval process is extremely expensive and generally takes many years to complete. If Ark fails to obtain or maintain regulatory approval for its products, it will be unable to market and sell such products. Of particular importance is the requirement, applicable in most territories, that an approval to market a product in the relevant territory be obtained from the relevant regulatory authority. Such approval requires the clinical evaluation of data relating to the quality, safety and efficacy of the product candidate for its proposed use. The time necessary to obtain regulatory approval varies among products and between the US, Europe and the rest of the world, and is affected by numerous factors, most of which are beyond Ark's control. There can be no assurance that regulatory clearance for trials at each stage, and approval for the Group's product candidates still in development, will be forthcoming without delay or at all. Further information on the regulatory regime applicable to Ark's products is set out in Part IV.

Healthcare products are subject to lengthy and rigorous pre-clinical testing and clinical trials and other extensive, costly and time-consuming procedures mandated by the FDA in the US and the EMEA or national regulatory authorities in Europe. Some leading-edge medicines, including some of Ark's products, are subject to public review by other bodies such as the DNA Recombinant Advisory Committee (US) and the Gene Therapy Advisory Committee (UK). Each regulatory authority may impose its own requirements and may refuse to grant, or may require additional data before granting, an approval notwithstanding that regulatory approval may have been granted by other authorities.

Regulatory approval may be delayed, limited or denied for a number of reasons, including the product not meeting safety/efficacy requirements or the relevant manufacturing processes or facilities not meeting applicable requirements. Ark's manufacturing facilities, whilst previously certified for Phase I/II production of gene-based medicines, are being prepared for upgrade to the standards required in the EMEA and FDA guidelines for Phase III/commercial supply. Unless and until the facilities comply with these standards, Ark

may not manufacture for clinical supplies at these facilities. There can be no guarantee that Ark's facilities will achieve compliance with these standards. In addition, there can be no guarantee that the regulations or policies applied by the relevant authorities will not change (and, with leading-edge medicines, there is an increased likelihood of the rules laid down by the regulatory bodies being changed), and any such change may require Ark to undertake additional work, which may not be successful in complying with revised standards.

Ark has in-licensed the active pharmaceutical ingredient in Vitor<sup>™</sup> and EG005 from another pharmaceutical company that has already secured marketing approval for the active pharmaceutical ingredient for the treatment of high blood pressure in certain jurisdictions. The pre-clinical and some of the clinical studies on these products were conducted by the other pharmaceutical company before Ark in-licensed the active pharmaceutical ingredient. Vitor<sup>™</sup> is in Phase III testing. Ark has submitted existing data relevant to the active pharmaceutical ingredient to the FDA and the EMEA and, as a consequence, Ark has not been asked to perform a Phase II study on Vitor<sup>™</sup> on patients with terminal cancer. There is, therefore, a risk that the Phase III study will provide unforeseen results that do not confirm safety or efficacy in such patients, that might have otherwise been discovered in a Phase II study. EG005 has not been validated in *in vivo* models, and thus there is a risk that clinical trials will not confirm efficacy.

In connection with its development programme for Trinam®, Ark performed a Phase I study using a VEGF gene, a liposomal vector and a collagen collar. The results demonstrated for the first time in man effective adventitial gene transfer and localised expression in the target tissue and no safety issues of concern were observed. Ark has performed further *in vivo* studies comparing VEGF genes and a variety of vectors and has now moved to a different VEGF gene and an adenoviral vector to take this product forward to the next stage of clinical development. While Ark has performed preclinical toxicology and biodistribution studies with the revised gene/vector combination, there is a risk that the Phase II study will not demonstrate the effective adventitial gene transfer, localised expression in target tissue and lack of safety issues of concern previously observed.

Regulatory authorities, including the FDA and the EMEA, may disagree with the Group's interpretations of data from pre-clinical studies and clinical trials. Regulatory authorities also may approve a product for fewer indications than requested or may grant approval subject to the performance of post-marketing studies for a product. In addition, regulatory authorities may not approve the labelling claims that are necessary or desirable for the successful commercialisation of the Group's products.

Even if Ark receives regulatory approvals, once marketed its products may exhibit adverse effects that limit or prevent their widespread use or that cause the products to lose their licenses and force Ark to withdraw those products from the market. This risk may be increased where a product had been granted Orphan Drug Status as a result of the more limited clinical testing which may be conducted prior to marketing approval being granted.

In addition, a marketed product continues to be subject to strict regulation after approval. Changes in applicable legislation and/or regulatory policies or discovery of problems with the product, production process, site or manufacturer may result in delays in bringing products to market, the imposition of restrictions on the product's sale or manufacture, including the possible withdrawal of the product from the market, or may otherwise have an adverse effect on Ark's business.

The failure to comply with applicable regulatory requirements can, among other things, result in fines, injunctions, civil penalties, total or partial suspension of regulatory approvals, refusal to approve pending applications, recalls or seizures of products, operating and production restrictions and criminal prosecutions.

Any delay in, or failure to receive or maintain, approval for any of Ark's products could prevent it from ever generating meaningful revenues or achieving profitability.

# Ark may experience delays in or fail to complete its clinical trials, both of which could affect its financial position and commercial prospects.

As part of the regulatory approval process, Ark must conduct pre-clinical studies and clinical trials for each of its unapproved products to demonstrate safety and efficacy. The number of pre-clinical studies and clinical trials that will be required varies depending on the product, the indication being evaluated, the trial results and the regulations applicable to the particular product. The results of pre-clinical studies and initial clinical trials of Ark's unapproved products do not necessarily predict the results of later-stage clinical trials. Unapproved products in later stages of clinical trials may fail to show the desired safety and efficacy despite having progressed through initial clinical trials. There can be no assurance that the data collected from the

pre-clinical studies and clinical trials of the Group's unapproved products will be sufficient to support FDA, EMEA, other regulatory approval, or approval from local ethics committees. In addition, the continuation of a particular study after review by an independent data safety monitoring board or review body does not necessarily indicate that all clinical trials will ultimately be successfully completed.

Ark cannot accurately predict when its current clinical trials will be completed, if at all, nor when planned clinical trials will begin or be completed. Successful and timely completion of clinical trials will require Ark to recruit a sufficient number of patient candidates, locate or develop manufacturing facilities with regulatory approval sufficient for production of the product to be tested and enter into agreements with clinical research organisations to perform the trials.

Many factors affect patient enrolment in clinical trials, including the size of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, competing clinical trials and new drugs approved for the conditions the trial is investigating. Other companies are conducting clinical trials and have announced plans for future trials that are seeking, or are likely to seek, patients with the same conditions as those Ark is studying. Competition for patients in cardiovascular disease and cancer clinical trials is particularly intense because of the limited number of leading cardiologists and oncologists and the geographic concentration of major clinical centres. As a result of all of these factors, Ark's trials may take longer to enrol patients than anticipated. Delays in patient enrolment in the trials may increase Ark's costs and slow down its product development and approval process. Trials may also be subject to delays stemming from patient withdrawal or from lower than expected event rates. These trials may also incur increased costs if enrolment is increased in order to achieve the desired number of events. Ark's product development costs will also increase if it needs to perform more, or larger, clinical trials than planned.

In order for the Group to conduct clinical trials on its unapproved products, the manufacture of such products is subject to regulatory authorisation and to the GMP (Good Manufacturing Practice) requirements of the countries or territories in which manufacturing and the trials are to take place. Ark is preparing to upgrade its manufacturing facilities as required by the FDA and EMEA to be in compliance with GMP standards for the purposes of Phase III trials for, and commercial supply of, Cerepro™ and Trinam®. Although the Group is currently preparing to upgrade its manufacturing facilities, any delays in this process could cause a delay in the clinical trials for those products. There can be no assurance that such trials will not be delayed. Ark may also not be able to access manufacturing facilities with the necessary qualifications for timely commencement and completion of clinical trials for any of its other unapproved products.

The Group relies on third-party contract research organisations to conduct its clinical trials and, accordingly, Ark has had and will continue to have less control over the timing and completion of the trials than would be the case if it were relying entirely upon its own staff. Errors by contract research organisations or other third parties involved in the trials, such as outside laboratories, could lead to delays, including those stemming from invalidating the participation of a patient.

The Group's products may produce unexpected side effects or serious adverse events which could interrupt, delay or halt clinical trials of Ark's unapproved products and could result in the FDA, EMEA or other regulatory authorities denying approval of its products for any or all targeted indications. An independent data safety monitoring board, the FDA, EMEA, other regulatory authorities or Ark itself may suspend or terminate clinical trials at any time. There can be no assurances that any of Ark's product candidates will ultimately prove to be safe for human use. Ark's clinical trials could also be delayed or terminated in the event that the product being tested is in the same class of drug as a marketed product that is revealed to cause side effects.

Any delays in completing clinical trials will delay Ark's ability to generate revenue from product sales, and the Group may have insufficient capital resources to support its operations. Even if the Group does have sufficient capital resources, its ability to generate meaningful revenues or become profitable will be delayed.

Post-approval Phase IV/Corroborative Studies and market use may not support the results of trials of those approved products with Orphan Drug Status or Fast Track Designation, which could lead to the withdrawal or suspension of regulatory approval.

A number of Ark's products have received Orphan Drug Status or Fast Track Designation and it is envisaged that other Ark product candidates will similarly qualify for such status. These designations are in recognition of the specialist areas of disease targeted by particular products and/or the current lack of approved products for a particular medical condition, and allow for the acceleration of the marketing approval process. Where such products have received marketing approval on the basis of limited pivotal studies, or

have otherwise been fast-tracked, further post-marketing clinical studies ("Phase IV/Corroborative Study") may or may not be required. There can be no guarantee that such post-approval studies, if required, will corroborate the results of earlier trials. Furthermore, the market use of such products may show different safety and efficacy profiles to those demonstrated in the trials on which marketing approval was based. Such circumstances could lead to the withdrawal or suspension of marketing approval for those particular products, which could have a material adverse effect on the Group's business, financial condition, operating results or cash flows.

# The Group relies or may rely on third parties for certain of its research, clinical trials, technology, manufacturing and sales and marketing.

The Group has entered into agreements and arrangements with a number of third parties and may enter into additional agreements and arrangements for research, clinical trials, technology, manufacturing and sales and marketing.

The Group has entered into consultancy agreements with a number of third parties, including Professor Martin and Professor Ylä-Herttuala and members of their respective research teams at University College London and the University of Kuopio, pursuant to which it obtains intellectual property rights to research. In addition, the Group obtains intellectual property rights derived from research conducted pursuant to funded projects conducted by the University of Kuopio research staff commissioned by Ark. The termination of any of these arrangements could have a material adverse effect on the Group's research and development programmes.

As already stated, the Group relies primarily on third party contract research organisations to conduct its clinical trials. As a result, Ark has had and will continue to have less control over the conduct of the clinical trials, the timing and completion of the trials, the required reporting of adverse events and the management of data developed through the trials than would be the case if it relied entirely upon its own staff.

Communicating with outside parties can also be challenging, potentially leading to mistakes as well as difficulties in co-ordinating activities. Outside parties may have staffing difficulties, may undergo changes in priorities or may become financially distressed, adversely affecting their willingness or ability to conduct the Group's trials. Ark may experience unexpected cost increases that are beyond its control. Problems with the timeliness or quality of the work of a contract research organisation may lead the Group to seek to terminate the relationship and use an alternative service provider. However, making this change may be costly and may delay the Group's trials, and contractual restrictions may make such a change difficult or impossible. Additionally, it may be impossible to find a replacement organisation that can conduct the Group's trials in an acceptable manner and at an acceptable cost.

Ark also licenses certain technologies which are material to its business from third parties, including the adenoviral vector manufacturing cell line for Trinam® and Scavidin® and the active pharmaceutical ingredient for EG005 and Vitor™. Ark does not own the patents or supplementary protection certificates which underlie these licences. These licences may generally be terminated by the licensor in the event of an unremedied breach by Ark of its obligations under the licence and in other specified circumstances. If any of the Group's licence agreements is terminated, the further development and commercialisation of some of the Group's products could be prevented or delayed, reducing its potential revenues. The scope of Ark's rights under its licences may be subject to dispute by licensors or third parties. In some cases, Ark does not control the prosecution or filing of the patents to which it holds licences and is reliant upon its licensors to prevent infringement of those patents. There can be no assurance that the Group will be able to obtain licences for the technologies that it requires in the future.

Ark relies on a number of contract manufacturing organisations to develop and manufacture certain of its products, including for its clinical development programmes. There is a risk that if one of these organisations were to cease supplying products for Ark without warning there would be a delay in, and an increase in the costs of, its product development programmes. Additionally there is a risk that the Group might not be able to secure or maintain the supplies of products or manufacturing capability that it may need in future. There can be no assurance that Ark's products, including its currently unapproved products, if approved, can be manufactured in sufficient commercial quantities, in compliance with regulatory requirements and at an acceptable cost. Although there are several potential manufacturers capable of manufacturing its products, Ark will, in most cases, rely on one manufacturer to manufacture products to marketing approval and thereafter intends to establish additional manufacturing arrangements for commercial supply. There can be no guarantee that Ark will be successful in establishing such manufacturing arrangements on acceptable terms, or at all, or in maintaining those it already has.

Ark plans initially to produce Cerepro<sup>TM</sup> and Trinam® in-house and, if marketing is approved, to increase production volumes in line with commercial market requirements. Whilst technologies used by Ark are successfully utilised by other manufacturers, there can be no guarantee that Ark's internal production teams will achieve desired production standards and volumes. If this were the case, shortfalls in supply could occur until Ark sourced an alternative commercial supply. Establishing a replacement source for any of the products could require at least 12 months and significant additional expense.

Ark currently has a small contract marketing and sales force for the Kerraboot® device. To the extent that the Group decides to market its own products in the future, significant expenditure and management resources will be needed to develop a marketing and sales capability with appropriate technical expertise and distribution capabilities. Ark may attempt to build such a sales and marketing organisation on its own or with the assistance of one or more contract sales organisations or commercialisation partners. For some market opportunities, the Group may need to enter into co-promotion or other licensing arrangements with larger pharmaceutical or biotechnology firms in order to increase the commercial success of its products. Ark may not be able to establish sales, marketing and distribution capabilities of its own or enter into arrangements with contract sales organisations or larger pharmaceutical or biotechnology firms in a timely manner or on acceptable terms. To the extent that Ark enters into co-promotion or other licensing arrangements, its product revenues are likely to be lower than if its products were directly marketed and sold, and some or all of the revenues received will depend upon the efforts of third parties, which cannot be guaranteed by Ark and which may not be successful. Additionally, building marketing and distribution capabilities may be more expensive than Ark anticipates, requiring it to divert capital from other intended purposes or preventing it from building its marketing and distribution capabilities to the desired levels.

Ark's dependence on third parties may reduce its profit margins and delay or limit its ability to develop and commercialise its products on a timely and competitive basis.

# The Group may not be able to adequately protect its proprietary technology.

Ark's ability to compete effectively with other companies depends, amongst other things, on exploitation of its technology. However, there can be no assurance that competitors have not developed or will not develop substantially equivalent technologies or otherwise gain access to Ark's technology. To date, Ark's 15 families of patent applications are currently progressing through the examination process, and it has been granted 10 patents, with another expected to be granted shortly, including one in Europe for the Kerraboot® device, which has been granted in 16 countries, and one in the United States for Cerepro™. With regard to Ark's lead products, patent applications are pending in the US for the Kerraboot® device, Vitor™ and Trinam® and in Europe for Cerepro<sup>™</sup>, Vitor<sup>™</sup> and Trinam®. There can be no assurance that further patents will be issued with respect to Ark's applications now pending or which may be applied for in the future. The lack of any such patents may have a material adverse effect on Ark's ability to develop and market its proposed products. No assurance can be given that Ark will develop products which are patentable or that its current or future patents will be sufficiently broad in their scope to provide commercially meaningful protection against competition from third parties. There can be no assurance as to the ownership, validity or scope of any patents which may be issued to Ark or that claims relating to its patents will not be asserted by other parties or that, if challenged, Ark's patents will not be revoked. Even if competitors do not successfully challenge Ark's patents, there can be no guarantee that they will not be able to design around Ark's patents or develop unique technologies or products providing effects similar to Ark's, which may decrease the Group's future potential revenues.

The commercial success of Ark will also depend upon its non-infringement of patents granted to, and other intellectual property rights of, third parties, including any who may have filed applications or who have obtained or may obtain patents relating to products which might inhibit Ark's ability to develop or exploit its own products. Additionally, as patent applications, in general, are not published until 18 months after the date of priority applications or, in some cases in the US, until grant, the Group cannot be certain that it was the first to make, or seek patent protection for, the invention claimed by each of its patents and patent applications. As a result of these factors, to avoid infringing third-party intellectual property rights, Ark may need to utilise alternative technology or exploit under licence other parties' intellectual property rights. Ark has in the past, and may in the future, license technologies for its development programmes. There can be no assurance that Ark will be able to obtain or maintain the right to utilise such technology or, where licences are required, that Ark will be able to obtain or maintain any such licence on commercially favourable terms, if at all. This may have a material adverse effect on Ark's business, financial condition, operating results and cash flows. In addition there can be no assurance that technologies licensed by Ark will not subsequently be found to infringe on third party intellectual property rights. Please refer to the Patent Attorney's Report in

Part VI for further details and please see the description of the Group's products in the section headed Business Development and Prospects in Part II.

To the extent that the Group's intellectual property rights are infringed, or the Group is alleged to infringe third-party intellectual property rights, litigation may be necessary to protect the Group's intellectual property rights or to defend the Group against infringement actions, which could result in substantial costs to, and diversion of efforts by, the Group with no guarantee of success. The Group's attempts to obtain patent or other protection for its technologies may also be subject to opposition, which the Group may need to incur substantial costs to overcome, with no guarantee of success. The Group may also feel it necessary to engage in costly opposition or interference proceedings to prevent third parties obtaining relevant patent or other protection, again with no guarantee of success.

# Ark's success depends on its key personnel, and it must continue to attract and retain key employees and consultants.

In common with many smaller companies, the Group's future success is substantially dependent on its key personnel, including Dr Nigel Parker, its Chief Executive Officer, Professor John Martin, its Chief Scientific Officer, Professor Seppo Ylä-Herttuala, its Consultant Director of Molecular Medicine, and Dr Alan Boyd, its Director of Development, as well as its other Executive Directors, senior management and consultants. The loss of any of these key personnel may have a material adverse effect on the future of the Group's business. Competition for qualified employees and personnel in scientific research and biotechnology industries is intense and there are a limited number of persons with knowledge appropriate to, and experience within, such industries. The process of locating such personnel with a combination of skills and attributes required to enable Ark to carry out its strategy is often lengthy.

Ark's success depends to a significant degree upon its ability to attract and retain qualified management, scientific, technical, marketing and sales personnel and upon the continued contributions of such management and personnel. Ark's employees may voluntarily terminate their employment at any time. There is no guarantee that Ark will be successful in attracting and retaining qualified executives, scientists and personnel.

Ark has obtained key man insurance cover for Dr Nigel Parker, Professor John Martin, Professor Seppo Ylä-Herttuala and Dr Alan Boyd, but not for any other of its key personnel. There can be no assurance that this would adequately compensate the Group for the loss of their services. The loss of the services of key personnel or the inability to attract additional qualified personnel could have a material adverse effect on the business, financial condition, results of operations and cash flows of Ark.

# Ark may be unable to compete effectively against new technologies or competitors that develop drugs that are cheaper, more effective or safer than Ark's products.

The biotechnology industry is characterised by significant and rapid technological change. Research and discoveries by others may render the Group's products obsolete.

The Group may experience competition for the Kerraboot® and its products currently under development. Competition may come from companies which have greater research, development, marketing, financial and personnel resources than Ark, and can, therefore, more quickly adapt to changes in the marketplace. Competitors may precede Ark in developing products and receiving regulatory approval or may succeed in developing products that are more effective, safe or economically viable than those developed by Ark. The Group cannot be sure that its products will:

- obtain regulatory approvals or reach the market more rapidly than those of its competitors;
- compete with safer, more effective or less costly products marketed by its competitors;
- · adapt rapidly enough to new technologies and scientific advances;
- be favoured by medical centres, physicians or patients over existing treatments for the same indications; or
- compete effectively with other products that treat the same indications.

Such successes by its competitors or technological changes could render Ark's technology and products obsolete and/or otherwise non-competitive.

In addition, where Ark's products address conditions which are caused by existing treatments, it is possible that those treatments could be modified or replaced, and the market for the product could therefore disappear. For example in the case of EG005, as lipodystrophy syndrome becomes better understood and more clearly associated with specific drugs or classes of drugs taken by HIV patients, the prevalence may be reduced by switching antiretroviral drugs or by the emergence of new antiretroviral drugs. This could reduce

the market need for EG005. In addition, where Ark's products are intended to be used in conjunction with an existing medical procedure, if an existing alternative medical procedure increases in popularity or a new medical procedure is developed, the market for Ark's product may deteriorate. For example, if the trend towards fistula usage and away from grafts continues, and Trinam® does not make a clinically relevant reduction in fistula failure rates, the market opportunity for Trinam® may diminish.

# Ark's manufacturing facilities and those of its third-party manufacturers are subject to regulatory requirements, which may impact on the Group's development and commercialisation of its products.

The Group's products will need to be manufactured to high standards, in commercial quantities, in compliance with regulatory requirements and at an acceptable cost. The manufacture of such products is subject to regulatory authorisation and to the GMP requirements prescribed in the relevant country or territory of manufacture or supply. While Ark is currently directing efforts towards ensuring that it meets both European and FDA requirements, there is a possibility that Ark may not meet FDA requirements for the US or EMEA requirements for Europe, which could cause delays and additional expense.

The GMP requirements govern quality control of the manufacturing process and documentation policies and procedures. Compliance by Ark and its third-party manufacturers with GMP requires record keeping and quality control to ensure that the product meets applicable specifications and other requirements including audits of vendors, contract laboratories and suppliers. Manufacturing facilities are subject to inspection by regulatory authorities at any time. If an inspection by a regulatory authority indicates that there are deficiencies, Ark or its third-party manufacturers, as appropriate, could be required to take remedial actions, stop production or close the relevant facility, which would disrupt the manufacturing processes and limit the supplies of the Group's products. If they fail to comply with these requirements, Ark also may be required to curtail the relevant clinical trials, may not be permitted to sell its products or may be limited as to the countries or territories in which it is permitted to sell them.

In addition, the Group's manufacturing capability for its gene-based products, in particular Trinam®, may need to be increased by moving from a shaker system/roller bottle system to small bioreactors for economical production and there is no guarantee that this process will be completed or that severe delay and additional expenses will not be incurred, which could therefore cause a delay in the supply of products for sale. Ark is currently preparing to upgrading its manufacturing facilities from Phase I/II to Phase III/commercial supply and are not yet in compliance with the standards for Phase III/commercial supply. There can be no assurance that this upgrade will be successful or that if the facility is licensed, the licence will not be suspended because of a failure to maintain compliance or for any other reason.

### Market acceptance of Ark's products is uncertain.

The success of the Group will depend on the market acceptance of its products and there can be no guarantee that this acceptance will be forthcoming. Notwithstanding the technical merits of a product developed by Ark, there can be no assurance that medical practitioners will adopt such products as a standard means of medical practice or that the medical procedures at which Ark's products are targeted will maintain market acceptance. Physicians will use Ark's products only if they determine, based on experience, clinical data, side effect profiles and other factors, that they are preferable to other products then in use or beneficial in combination with other products. Recommendations and endorsements by influential physicians will be essential for market acceptance of Ark's products, and the Group may not be able to obtain these recommendations and endorsements.

Many other factors influence the adoption of new products, including marketing and distribution restrictions, adverse publicity, product pricing and reimbursement by third-party payers, as well as the introduction of competing products. Even if Ark's products achieve market acceptance, the market may not be large enough to allow Ark to generate significant revenues. The failure of Ark's products to achieve market acceptance would prevent it from ever generating meaningful product revenues.

Market acceptance of Ark's products may depend on their superiority over existing therapies. Any restriction on Ark's ability to advertise or otherwise promote claims of superiority, or requirements to conduct additional expensive clinical trials to provide proof of such claims, could negatively effect the sales of its products and/or its costs.

### There may be uncertainty over reimbursement from third parties for newly approved healthcare drugs.

Ark's ability to commercialise its products may depend, in part, on the extent to which reimbursement for the products will be available from government and health administration authorities, private health insurers, managed care programmes and other third-party payers.

Significant uncertainty exists as to the reimbursement status of newly approved healthcare products. In many countries, medicinal products are subject to a regime of reimbursement by government health authorities, private health insurers or other organisations. There is increasing pressure from these organisations to limit healthcare costs by restricting the availability and level of reimbursement. Whilst the Group anticipates pricing its products in the range of current new biotechnology products, there can be no assurance that adequate public health service or health insurance coverage will be available to enable the Group to obtain or maintain prices for its products sufficient to realise an appropriate return on investment.

In addition, changes to the rules and regulations regarding reimbursement or changes to existing regimes of reimbursement or the introduction of a new regime in any country could impact on whether reimbursement is available at adequate levels or at all. Rules and regulations regarding reimbursement may change frequently, in some cases at short notice. In view of the global cost pressures on healthcare and pharmaceutical markets, further changes should be expected.

## The Group must effectively manage the growth of its operations.

The Group has in recent years operated in the UK and Finland and has more recently expanded its operations through the establishment of its US subsidiary, KerraTec Inc., in the United States. The Group's ability to manage its growth effectively will require it to continue to improve its operations, financial and management controls, reporting systems and procedures, and to train, motivate and manage its employees and, as required, to install new management information and control systems. There can be no assurance that the Group will be able to implement improvements to its management information and control systems in an efficient and timely manner or that, if implemented, such improvements will be adequate to support the Group's operations. Any inability of the Group to manage its expansion successfully could have a material adverse effect on its business, results of operations and financial condition. The Directors believe that the Company complies and intend that it will continue to comply with the Combined Code (see "Corporate Governance" in Part II). If at any time it does not comply with the Combined Code, there is a risk that the Company may be subject to criticism from shareholder bodies, which may impact on the share price of the Company. If the Company fails to disclose non-compliance as required by the Combined Code it may also be subject to censure or a fine.

# If Ark faces product liability claims, damages may exceed its insurance.

Ark's business exposes it to potential product liability and professional indemnity risks which are inherent in the research, development, manufacturing, marketing and use of medical treatments. It is impossible to predict the potential adverse effects that the Group's products may have on humans. The Group faces the risk that the use of its products in human clinical trials will result in adverse effects, or that long-term adverse effects may only be identified following clinical trials and approval for commercial sale. In addition, there can be no assurance that physicians and patients will comply with any warnings that identify the known potential adverse effects and any patients who should not receive the Group's products. There can be no assurance that the necessary insurance cover will be available to Ark at an acceptable cost or at all, or that, in the event of any claim, the level of insurance carried by Ark now or in the future will be adequate or that a product liability or other claim would not materially and adversely affect Ark's business. If Ark cannot adequately protect against potential liability claims, it may find it difficult or impossible to commercialise its products.

# Ark's operations involve hazardous materials, including biological materials, and compliance with environmental laws and regulations is expensive.

The Group's operations, including its manufacturing facilities, are subject to environmental and safety laws and regulations, including those governing use of hazardous materials, such as biological materials. The cost of compliance with these and similar future regulations could be substantial. Although Ark believes its procedures comply with applicable regulations, the risk of accidental contamination or injury from the biological and other hazardous materials with which Ark works cannot be eliminated. If an accident or contamination occurred, Ark would likely incur significant costs associated with civil damages and penalties or criminal fines, and in complying with environmental laws and regulations. Any accident or contamination

could have an adverse effect on Ark's business, financial condition, operating results and cash flows. The Group's insurance may not be adequate to cover the damages, penalties and fines that could result from an accident or contamination, and the Group may not be able to obtain adequate insurance at an acceptable cost or at all.

## Exchange rate fluctuations may negatively affect Ark's financial condition.

As a consequence of the international nature of its business, Ark is exposed to risks associated with changes in foreign currency exchange rates. Ark is based in the United Kingdom and presents its consolidated financial statements in pounds sterling. Substantially all of Ark's cash resources are in pounds sterling. Currently, currency risk affects primarily Ark's clinical trials undertaken in the US as these represent a large proportion of its operating costs. To a lesser extent, the currency risk arises in Europe since a proportion of Ark's operational costs are incurred in euros in Finland but are recharged to the Group. Ark's sales operations will also be affected by fluctuations in exchange rates in the future to the extent its sales are denominated in currencies other than pounds sterling. A large proportion of any future revenues of Ark are expected to be in US dollars. In February 2004, the US dollar fell to an eleven-year low against the pound sterling.

Movements in the exchange rates to translate foreign currencies, in particular the US dollar and the Euro, into pounds sterling may have a significant impact on Ark's reported results of operations, financial position and cash flows from year to year.

## The uncertain regulatory, environmental and public perception of ethical and social issues surrounding the use of gene-based medicines may limit or discourage the use of Ark's products.

Ark's success will depend upon its ability to continue to develop therapeutic products through its research programmes. For social or other purposes, governmental authorities may call for limits on, or regulation of, research into and testing of gene-based medicines, such as Cerepro™ and Trinam®. Thus far, no human gene therapy product has been approved for market by the US or EU regulatory authorities, which makes the regulatory requirements more uncertain than for conventional pharmaceuticals medicines.

Claims that gene-based products are unsafe for consumption or pose a danger to the environment may influence public attitudes, and such products have received negative publicity and aroused public debate in some countries. Ethical and other concerns about Ark's gene-based research work, and the products resulting from this research, could materially and adversely affect the market acceptance of Ark's products.

## RISKS RELATED TO THE OFFER

## The share price may be highly volatile.

The share price of publicly traded emerging healthcare companies can be highly volatile. The price at which the Ordinary Shares will be quoted and the price which investors may realise for their Ordinary Shares will be influenced by a large number of factors, some specific to Ark and its operations, some which may affect the quoted biotechnology sector, companies with gene-based medicines or quoted companies generally, and many of which are outside the control of the Group. These include:

- · actual or anticipated results of clinical trials;
- actual or anticipated regulatory approvals of healthcare products or of competing products;
- · changes in laws or regulations applicable to healthcare products;
- · changes in the expected or actual timing of development programmes;
- actual or anticipated variations in periodic operating results;
- · announcements of technological innovations by the Group, or its competitors;
- new products or services introduced or announced by the Group or its competitors;
- · changes in financial estimates or recommendations by securities analysts;
- conditions or trends in the biotechnology and pharmaceutical industries;
- changes in the market valuations of similar companies;

- announcements by the Group of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- additions or departures of key personnel;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and the Group's ability to obtain, maintain and defend patent protection for its technologies and to avoid infringement of third party intellectual property rights; and
- trading volume of the Ordinary Shares.

In addition, the stock market in general, and the market for technology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Further, there has been particular volatility in the market prices of securities of biotechnology and healthcare companies. These broad market and industry factors may seriously harm the market price of the Ordinary Shares, regardless of its operating performance.

#### Future sales of Ordinary Shares in the public market could cause the stock price to fall.

Sales of a substantial number of Ordinary Shares in the public market after the Offer, or the perception that these sales might occur, could depress the market price of the Company's Ordinary Shares and could impair the Company's ability to raise capital through the sale of additional equity securities. The lock-up agreements described in "Details of the Offer" at Part IX limit the number of Ordinary Shares that can be sold immediately following the Offer, however, other than these restrictions, there are no limitations on the number of Ordinary Shares that may be sold in the UK public trading market.

## It is possible that Ark may become a passive foreign investment company (PFIC) for US Federal income tax purposes, which could result in negative tax consequences to US shareholders.

The Company believes that it is not, and the Company does not expect to become, a PFIC, for US federal income tax purposes for 2004 or future years. The Company must annually determine whether it is a PFIC. PFIC status is fundamentally factual in nature and generally cannot be determined until the close of the taxable year in question. Consequently, the Company can provide no assurance that it will not be a PFIC for either the current taxable year or for any subsequent taxable year. While the Company believes that it is currently not a PFIC, it is possible that the Company will become a PFIC in the current or any future year due to failure to generate sufficient gross income from the Company's business, changes in its asset or income composition, or if its internal projections are not accurate. Because the Company's goodwill and other intangible assets are valued based on the anticipated market value of the Ordinary Shares immediately following Admission, a decrease in the price of the Ordinary Shares could result in the Company becoming a PFIC. If the Company is classified as a PFIC in any year that a US holder is a shareholder, the Company generally will continue to be treated as a PFIC for that US holder in all succeeding years, regardless of whether the Company continues to meet the income or asset test described above, although shareholder elections may apply in certain circumstances. If the Company is considered to be a PFIC in any year, special, possibly materially adverse, consequences would result for US holders of Ordinary Shares as described in "Tax Considerations for Certain US Holders" in Part X. US investors are urged to consult their own tax advisors about the application of the passive foreign investment company rules in their particular circumstances.

#### Possible unavailability of pre-emptive rights for United States holders of Ordinary Shares.

In the case of an increase of the issued share capital of the Group, existing Group shareholders are entitled to pre-emptive rights pursuant to the Act unless waived by a resolution of the shareholders at a general meeting. U.S. holders of the Ordinary Shares may not be able to exercise pre-emptive rights for their Ordinary Shares unless a registration statement under the Securities Act is effective with respect to such rights, or an exemption from the registration requirements thereunder is available. As a result, the Directors may seek permission from the shareholders to exclude U.S. holders from the distribution of pre-emptive rights. Accordingly, no assurance can be given that U.S. holders of Ordinary Shares will receive the full benefit of these statutory pre-emptive rights.

#### PART IV — REGULATORY FRAMEWORK

## GOVERNMENT REGULATION AND PRODUCT APPROVAL IN EUROPE AND THE US

## Requirements for Approval of New Drugs in Europe

The clinical development, manufacturing and marketing of medicinal products in the EU is regulated by the European Agency for the Evaluation of Medicinal Products (EMEA). The process of clinical trials is broadly similar to the process in the US. Initially, pre-clinical trials are conducted to evaluate product chemistry and formulation and *in vivo* tests are conducted until adequate proof of safety is established. Clinical trials for new products are typically conducted in three sequential phases that may overlap. In Phase I, the initial introduction of the pharmaceutical into healthy human volunteers, the emphasis is on testing for safety and adverse effects, dosage tolerance, metabolism, distribution, excretion and clinical pharmacology. Phase II involves studies in a limited patient population to determine the initial efficacy of the pharmaceutical for specific targeted indications, to determine dosage tolerance and optimal dosage and to identify possible adverse side effects and safety risks. Once a compound shows evidence of effectiveness and is found to have an acceptable safety profile in Phase II evaluations, Phase III trials are undertaken to more fully evaluate clinical outcomes.

Prior regulatory approval for human healthy volunteer studies is required in member states of the EU. Currently, in each member state of the EU, following successful completion of Phase I studies, data is submitted in summarised format to the applicable regulatory authority in the member state in respect of applications for the conduct of later Phase II studies. The regulatory authorities in the EU typically have between one and three months in which to raise any objections to the proposed study, and they often have the right to extend this review period at their discretion. The authorities may require additional data before allowing the studies to commence and could demand that the studies be discontinued at any time if there are significant safety issues. In addition to the regulatory review, a study involving human subjects has to be approved by an independent body concerned with ethical matters. The exact composition and responsibilities of this body will differ from country to country. In each member state of the EU one or more independent ethics committees will review the ethics of conducting the proposed research.

#### Centralised and Decentralised Procedure

In order to gain marketing approval, a marketing authorisation application must be submitted to the EMEA. This will include information on the quality of the chemistry, manufacturing and pharmaceutical aspects of the product as well as the non-clinical and clinical data. There are different authorisation routes: centralised and decentralised. Under the centralised route one marketing authorisation is granted for the entire EU, while under the decentralised route a series of national marketing authorisations are granted. Biotechnology products have no choice and must submit their approval requests through the centralised procedure directly to the EMEA.

In the centralised system the application will be reviewed by members of the Committee for Proprietary Medicinal Products (CPMP), on behalf of the EMEA. The EMEA will, based upon the review of the CPMP, provide an opinion to the European Commission on the safety, quality and efficacy of the product. The decision to grant or refuse an authorisation is made by the European Commission. This procedure takes up to 388 days and grants a single market authorisation applicable to the entire EU. In the future, this procedure will be recommended for all pharmaceuticals seeking market authorisation in Europe while the decentralised procedure is phased out.

In circumstances where use of the centralised route is not mandatory, Ark can choose to use the decentralised route, in which case the application will be reviewed by one member state's regulatory agency. If the regulatory agency grants the authorisation, other member states' regulatory authority are asked to "mutually recognise" the authorisation granted by the first member state's regulatory agency. Should a national authorisation not be recognised, the dispute is submitted to the EMEA for arbitration. This procedure takes a maximum of 358 days after the first authorisation is granted. The approval process can be affected by a number of factors. Additional studies or clinical trials may be requested during the review and may delay marketing approval and involve unbudgeted costs. The regulatory authorities may conduct an inspection of relevant facilities, and review manufacturing procedures, operating systems and personnel qualifications. In addition to obtaining approval for each product, in many cases each drug manufacturing facility must be approved. Further inspections may occur over the life of the product. An inspection of the clinical investigation sites by a competent authority may be required as part of the regulatory approval procedure. As a condition of marketing approval, the regulatory agency may require post-marketing surveillance to monitor

for adverse effects, or other additional studies as deemed appropriate. After approval for the initial indication, further clinical studies are usually necessary to gain approval for any additional indications. The terms of any approval, including labelling content, may be more restrictive than expected and could affect the marketability of a product.

The EU rules relating to marketing authorisations permit, in "exceptional circumstances", the regulatory authorities to grant a marketing authorisation where the applicant is not able to provide the usual comprehensive set of data relating to safety and efficacy, because the targeted disease state is rarely encountered or because there is a lack of scientific knowledge about the disease, or because it would be unethical to collect such data. Marketing authorisations granted on an exceptional circumstances basis are normally subject to the holder fulfilling certain obligations, such as completion by the applicant of post-approval clinical studies.

## Orphan Drug Status

Orphan Drug Status may be granted to drugs intended to treat a "rare disease or condition", which is if the disease is life threatening or chronically debilitating and affects no more than 50 in 100,000 persons in the EU; where without incentive it is unlikely that the drug would generate sufficient return to justify the necessary investment; and no satisfactory method of treatment for the condition exists or, if it does, the new drug will provide a significant benefit to those affected by the condition. If a product that has an orphan drug designation subsequently receives the first regulatory approval for the indication for which it has such designation, the product is entitled to orphan exclusivity, meaning that the other applications to market the same drug for the same indication may not be approved, except in certain very limited circumstances, for a period of ten years. Orphan Drug Status does not prevent competitors from developing or marketing different drugs for an indication. Orphan Drug Status must be requested before submitting a marketing authorisation application. After Orphan Drug Status is granted, the identity of the therapeutic agent and its potential orphan use are publicly disclosed. Orphan Drug Status does not convey an advantage in, or shorten the duration of, the review and approval process.

Cerepro<sup>™</sup> has been granted orphan drug designation in Europe, and the Group has commenced the process of filing for Orphan Drug Status for Trinam<sup>®</sup>.

## Requirements for Approval of Medical Devices in Europe

A "Medical Device" is defined in Directive (93/42/EEC) as: any instrument, apparatus, appliance, material or other article, whether used alone or in combination, including the software necessary for the proper application, intended by the manufacturer to be used for human beings for the purpose of:

- diagnosis, prevention, monitoring, treatment or alleviation of a disease, an injury or a handicap;
- investigation, replacement or modification of the anatomy or of a physiological process;
- · control of conception;

and which does not achieve its principal intended action in or on the human body by pharmacological, immunological or metabolic means, but which may be assisted by such means.

This Directive divides devices into four classes. Class I — low risk, Class IIa and IIb — medium risk, and Class III — high risk. It also provides a number of conformity assessment procedures which detail the necessary steps for manufacturers to follow in order to allow them to affix CE Marking. The conformity procedure will include an independent assessment of the product and/or quality system.

As well as being subject to the regulations above relating to drugs, medical devices are subject to CE Marking. The letters "CE" are the abbreviation of the French phrase "Conformité Européen" which literally means "European Conformity". CE Marking on a product is a manufacturer's declaration that the product complies with the essential requirements of the relevant European health, safety and environmental protection legislations. CE Marking on a product indicates to governmental officials that the product may be legally placed on the market in their country, it ensures the free movement of the product within the EU single market and permits the withdrawal of the non-conforming products by customs and enforcement/vigilance authorities.

Medical devices are subject to the Directive of Active Implantable Medical Devices (90/385/EEC), the Medical Devices Directive (93/42/EEC), and the Directive of In Vitro Diagnostic Medical Devices (980/79/EC). The Directives set out essential requirements to ensure that a medical device will not

compromise the health and safety of the patient, user or any other person, and that any risks associated with the device are still compatible with patient health and protection. Devices that conform to these requirements are entitled to apply the CE Marking, which allows the product to be freely placed on the market within the EU.

The directives often use a series of questions about the nature of a product to classify the level of risk and refer to a chart called 'Conformity Assessment Procedures'. The chart includes all of the acceptable options available to a manufacturer to certify their product and affix the CE Marking. Kerraboot® is CE marked as a Class IIb medical device.

#### Requirements for Approval of New Drugs in the US

The research, testing, manufacture and marketing of drug products are extensively regulated by numerous governmental authorities in the United States and other countries. In the United States, drugs are subject to rigorous regulation by the Food and Drug Administration (FDA). Federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, record keeping, labelling, promotion and marketing and distribution of pharmaceutical products. Failure to comply with applicable regulatory requirements may subject a company to a variety of administrative or judicially-imposed sanctions and/or the inability to obtain or maintain required approvals or to market approved drug products.

The steps ordinarily required before a pharmaceutical product may be marketed in the United States include pre-clinical *in vitro* laboratory tests, *in vivo* tests and formulation studies, the submission to the FDA of a notice of claimed investigational exemption or an investigational new drug application, which must become effective before clinical testing may commence, and adequate and well-controlled clinical trials to establish the safety and effectiveness of the drug for each indication for which FDA approval is sought. Satisfaction of FDA pre-market approval requirements typically takes several years and the actual time required may vary substantially based upon the type, complexity and novelty of the product or disease.

#### Clinical Trials

Pre-clinical tests include laboratory evaluation of product chemistry and formulation, as well as *in vivo* trials to assess the potential safety and efficacy of the product. The conduct of the pre-clinical tests and formulation of compounds for testing must comply with federal regulations and requirements. The results of pre-clinical testing are submitted to the FDA as part of an investigational new drug application to allow human trials to begin.

A 30-day waiting period after the filing of each investigational new drug application is required prior to the commencement of clinical testing in humans. If the FDA has not commented on or questioned the investigational new drug application within this 30-day period, clinical trials may begin. If the FDA has comments or questions, the questions must be answered to the satisfaction of the FDA before initial clinical testing can begin. In addition, the FDA may, at any time, impose a clinical hold on ongoing clinical trials. If the FDA imposes a clinical hold, clinical trials cannot commence or recommence without FDA authorisation and then only under terms authorised by the FDA.

As in the EU, clinical trials involve the administration of the investigational new drug to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted in compliance with federal regulations and requirements, under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each protocol involving testing on US subjects must be submitted to the FDA as part of the investigational new drug application. The study protocol and informed consent information for patients in clinical trials must be submitted to institutional review boards for approval.

Clinical trials to support new drug applications for marketing approval are typically conducted in three sequential phases, but the phases may overlap. Phase I, Phase II and Phase III trials fulfill a similar function to the same phases in the EU.

Once a compound demonstrates evidence of an acceptable safety profile in Phase II evaluations, Phase III trials are undertaken to evaluate clinical efficacy and to further test for safety within an expanded patient population, typically at geographically dispersed clinical trial sites.

Whilst this is typical of clinical development for new drugs, different configurations occur in many circumstances, notably in connection with cancer drugs, biologics and surgical interventions. Accordingly, the clinical testing of each candidate or programme will be run in accordance with its actual needs.

#### New Drug Application (NDA)

After successful completion of the required clinical testing, an NDA (or, with respect to biologics such as Cerepro™ and Trinam®, these are known as a Biologics Licence Application (BLA)) is prepared and submitted to the FDA. FDA approval of the NDA is required before marketing of the product may begin in the United States. The NDA must include the results of the pre-clinical and clinical trials and other testing and a compilation of data relating to the product's pharmacology, chemistry, manufacture, and quality controls. The cost of preparing and submitting an NDA is substantial. Under US federal law, the submission of NDAs are additionally subject to substantial application user fees, currently exceeding \$500,000, and the manufacturer and/or sponsor under an approved an NDA are also subject to annual product and establishment user fees, currently exceeding \$30,000 per product and \$200,000 per establishment. These fees are typically increased annually.

The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that the NDA is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review of the NDA. Under federal law, the FDA has agreed to certain performance goals in the review of new drug applications. Most such applications for non-priority drug products are reviewed within ten months. The review process is often significantly extended by FDA requests for additional information or clarification regarding information already provided in the submission. The FDA may also refer applications for novel drug products or drug products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee.

Before approving an NDA or BLA, the FDA will inspect the facilities at which the product is manufactured and will not approve the product unless the manufacturing facilities are in compliance with FDA's good manufacturing practice regulations which govern the manufacture, holding and distribution of a product. Manufacturers of biologics also must comply with FDA's general biological product standards.

If FDA evaluations of the NDA and the manufacturing facilities are favourable, the FDA may issue an approval letter, or, in some cases, an approvable letter followed by another approval letter. An approvable letter generally contains a statement of specific conditions that must be met in order to secure final approval of the NDA. If and when those conditions have been met to the FDA's satisfaction, the FDA will typically issue an approval letter. An approval letter authorises commercial marketing of the drug with specific prescribing information for specific indications. As a condition of NDA approval, the FDA may require post-approval testing and surveillance to monitor the drug's safety or efficacy and may impose other conditions, including labelling restrictions which can materially impact the potential market and profitability of the drug (and the FDA can require potentially expensive Phase IV studies). Once granted, product approvals may be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing.

## Post-Approval Requirements

Once the NDA is approved, a product will be subject to certain post-approval requirements, including requirements for adverse event reporting and submission of periodic reports. Additionally, the FDA also strictly regulates the promotional claims that may be made about prescription drug products. In particular, the FDA requires substantiation of any claims of superiority of one product over another including, in many cases, requirements that such claims be proven by adequate and well controlled head-to-head clinical trials. To the extent that market acceptance of the Group's products may depend on their superiority over existing therapies, any restriction on its ability to advertise or otherwise promote claims of superiority, or requirements to conduct additional expensive clinical trials to provide proof of such claims, could negatively effect the sales of its products and/or its costs.

If the FDA's evaluation of the NDA or manufacturing facilities is not favourable, the FDA may refuse to approve the new drug application or issue a not approvable letter. The not approvable letter outlines the deficiencies in the submission and often requires additional testing or information in order for the FDA to reconsider the application. Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. With limited exceptions, the FDA may withhold approval of an NDA regardless of prior advice it may have provided or commitments it may have made to the sponsor.

#### Fast Track Designation

US law provides for a special review and approval procedures for "fast track" products which are enacted under the FDA Modernization Act. A fast track product is defined as a new drug for the treatment of a serious or life-threatening condition that demonstrates the potential to address unmet medical needs for this condition. Under the fast track programme, the sponsor of a new drug or biologic may, after filing the NDA, request that the FDA designate the drug as a fast track product at any time during the development of the product, prior to marketing.

The FDA can base approval of a marketing application for a fast track product on an effect, on a surrogate endpoint, or on another endpoint that is reasonably likely to predict clinical benefit. The FDA may subject approval of an application for certain fast track products to post-approval studies to validate the surrogate endpoint or confirm the effect on the clinical endpoint and prior review of all promotional materials. In addition, the FDA may withdraw its approval of a fast track designation on a number of grounds, including the sponsor's failure to conduct any required post-approval study with due diligence.

Vitor™ (treatment for muscle wasting (cachexia) in cancer) has been awarded Fast Track Designation by the FDA.

#### Orphan Drug Status

Orphan drug status is granted by the FDA to drugs that are intended to treat a "rare disease or condition", which is defined as one affecting no more than 75 in 100,000 persons or fewer than 200,000 people. Orphan drug status encourages manufacturers to develop drugs intended for rare diseases by qualifying the developer for tax credits and an exclusive period of seven years during which the FDA cannot approve other applications to market the same drug for the same indication, unless superiority can be demonstrated.

Cerepro<sup>™</sup> (treatment for brain cancer-malignant glioma) and Trinam<sup>®</sup> (treatment to prevent blocking of blood vessels after surgery) have both been granted orphan drug status in the US.

#### Ongoing Regulatory Requirements

The FDA periodically inspects drug and biologic manufacturing facilities to ensure continued compliance with the good manufacturing practices regulations. Manufacturers must continue to expend time, money and effort in the areas of production and quality control and record keeping and reporting to ensure full compliance with those requirements. Failure to comply with these requirements subjects the manufacturer to possible legal or regulatory action, such as suspension of manufacturing, seizure of product, or voluntary recall of product. Adverse experiences with the product must be reported to the FDA and could result in the imposition of marketing restrictions through labelling changes or market removal. Product approvals may be withdrawn if compliance with regulatory requirements is not maintained or if problems concerning safety or efficacy of the product occur following approval.

The labelling, advertising, promotion, marketing and distribution of a drug or biologic product also must be in compliance with FDA and Federal Trade Commission (FTC) requirements which include, among others, standards and regulations for direct-to-consumer advertising, off-label promotion, industry sponsored scientific and educational activities, and promotional activities involving the internet. The FDA and FTC have very broad enforcement authority, and failure to abide by these regulations can result in penalties, including the issuance of a Warning Letter directing the company to correct deviations from regulatory standards and enforcement actions that can include seizures, injunctions and criminal prosecution.

#### Requirements for Approval of Medical Devices in the US

Products that incorporate drugs into medical devices, such as the Group's biodegradable delivery device for Trinam®, are potentially subject to regulatory requirements applicable to medical devices as well as those applicable to drugs. The FDA has recently established an Office of Combination Products within the office of the FDA Commissioner and has published revised regulations implementing statutory requirements directed at ensuring prompt and consistent regulation of drug/device combination products. However, because of the limited experience with combination product review, the manner in which it may be modified and applied in the future to similar or different types of products is unpredictable.

Medical devices are regulated by the FDA according to their classification. The FDA classifies a medical device into one of three categories based on the device's risk and what is known about the device. The three categories are as follows:

Class I devices are generally lower risk products for which sufficient information exists establishing that general regulatory controls provide reasonable assurance of safety and effectiveness.

Class II devices are devices for which general regulatory controls are insufficient to provide reasonable assurance of safety and effectiveness and for which there is sufficient information to establish special controls, such as guidance documents or performance standards, to provide a reasonable assurance of safety and effectiveness. Clearance of a premarket notification under section 510(k) of the Federal Food, Drug and Cosmetic Act is necessary prior to marketing a non-exempt Class II device in the United States.

Class III devices are devices for which there is insufficient information demonstrating that general and special controls will provide a reasonable assurance of safety and effectiveness. Typical Class III devices are life-sustaining, life-supporting or implantable devices, or devices posing substantial risk. The FDA generally must approve a pre-market approval application prior to the marketing of a Class III device in the United States.

A pre-market approval application must be supported by valid scientific evidence, which typically includes extensive data, including pre-clinical data and clinical data from well-controlled or partially controlled clinical trials, to demonstrate the safety and effectiveness of the device. Product and manufacturing and controls specifications and information must also be provided. The FDA may refuse to accept a pre-market approval application for filing and often will require additional clinical trial data or other information before approval. Any subsequent change to an approved device that affects the safety or effectiveness of the device will require approval of a supplemental pre-market approval application.

Whether or not a product is required to be approved before marketing, Ark must comply with strict FDA requirements applicable to devices, including quality system requirements pertaining to all aspects of its product design and manufacturing process, such as requirements for packaging, labelling, record keeping, including complaint files, and corrective and preventative action related to product or process deficiencies. The FDA enforces its quality system requirements through periodic inspections of medical device manufacturing facilities. In addition, Medical Device Reports must be submitted to the FDA to report device-related deaths or serious injuries, and malfunctions the recurrence of which would likely cause serious injury or death. Medical device reports can result in agency action such as inspection, recalls, and patient/physician notifications, and are often the basis for agency enforcement actions. Because the reports are publicly available, they can also become the basis for private tort suits, including class actions and unfavourable publicity.

The bio-degradable device developed by the Group as part of Trinam® is made from the same material as another product that is already marketed in the US and will be regulated in the US as a Class II 510(k) device. Kerraboot® has been listed by the FDA in the US (user number issued) as a Class I device.



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3 March 2004

Dear Sirs

## 1 BACKGROUND AND INTRODUCTION

Cambridge Consultants Ltd ("CCL") is a leading international technology consulting company, which serves a wide client base including pharmaceutical, medical device, drug delivery device, medical product, medical diagnostics and biotechnology companies. It employs specialists with knowledge of science, technology, engineering, product development, markets and business issues in these industries. CCL has conducted technical due diligence studies associated with mergers, acquisitions, flotations and other financing exercises.

Credit Suisse First Boston (Europe) Limited, Credit Suisse First Boston Equities Limited (together "CSFB") and Nomura International plc, on behalf of the Directors of Ark Therapeutics Group plc ("Ark") have instructed CCL to prepare an independent technical Experts' Report in connection with the proposed offering of shares in Ark and its admission to the Official List of the UK Listing Authority and to trading on the main market of the London Stock Exchange. This report covers certain technical aspects of Ark's business and that of its subsidiaries (together the "Group") namely:

- the merits of the Group's products;
- the aspects of the Group's business plan including the critical path and timescale to commercial exploitation and any projections of the market potential for the Group's products; and
- the risk factors which might affect the Group's business plan.

In preparing this report, CCL has conducted interviews with certain of Ark's staff, officers and clinical and research collaborators. CCL undertook reviews of certain documentation prepared or held by Ark, including project plans, clinical trial plans, regulatory submissions, manufacturing plans, market reports and publications. These were augmented by internal database searches, use of in-house know how and interviews



with healthcare professionals. We have not visited Ark's facilities in Kuopio, Finland since early 2002 nor have we visited manufacturers used by Ark.

This report has been prepared based upon information that was furnished by Ark at the time of preparation, being the date of this report. CCL has no reason to doubt the veracity of the information provided but has only verified it to the extent identified above. CCL does not express any opinion as to Ark's ownership or rights to use intellectual property (if any) nor, where we refer to the Group's agreements, do we express any opinion as to the legal validity of those agreements nor on any aspect of the Group's financial record or future financial prospects or performance. This report is limited to the matters set out above and CCL is not advising generally on the merits or otherwise of an investment in the Group.

#### 2 OVERVIEW

Ark is an emerging healthcare company with one recently launched product and three further lead products in clinical development. The Group is focused on areas with high unmet medical needs and its main areas of activity are in vascular disease and cancer.

Ark was formed in 2001 when Eurogene Ltd, a British company, acquired the Finnish company Oy Quattrogene Ltd and the combined operation was renamed Ark Therapeutics Ltd. Ark (as Eurogene Ltd) was established in 1997 by three scientists from University College, London (UCL) and the AI Virtanen Institute at the University of Kuopio, Finland. The Group's headquarters are in London.

Ark's focus is on product candidates that have the potential for Orphan Drug Status in the US or Europe or for Fast Track Designation from the US regulatory authorities.

Ark has a broad portfolio of lead products including:

- Cerepro<sup>™</sup>, (formerly EG009), a gene-based approach for the treatment of malignant glioma. This has completed two safety and efficacy studies with a corroborative study in preparation. Cerepro<sup>™</sup> has been granted Orphan Drug Status in both the US and Europe.
- Vitor<sup>™</sup> (formerly EG006), an oral small molecule treatment for cachexia (involuntary weight loss) associated with cancer. This is in a Phase III trial in the US, Canada and UK and has been awarded Fast Track Designation by the US Food and Drug Administration (FDA).
- Trinam®, a gene-based approach for the prevention of stenosis of haemodialysis access grafts. This has received an Investigational New Drug (IND) approval for a Phase II clinical trial in the US and the US Recombinant DNA Advisory Committee (RAC) has endorsed a Phase IIb trial. Trinam® has been granted Orphan Drug Status in the US.
- Kerraboot®, a medical dressing device for lower limb ulceration has recently been introduced to
  hospitals in the UK. It has been awarded a CE Mark that enables marketing in the EU and has
  obtained a device listing in the US allowing it to be marketed.

In addition EG005, an oral small molecule approach for the management of lipodystrophy in human immunodeficiency virus (HIV) positive patients, is in a Phase II clinical trial in the UK.

Ark is also developing a diagnostic assay, EG010, designed to measure levels of antibodies against oxidised low density lipoproteins (Ox-LDL), a possible predictor of cardiac events due to atherosclerotic disease. We understand that Ark intends to seek a CE Mark for this during 2004.

Ark has a pipeline of earlier stage products and technologies in research and preclinical development including Scavidin®, a drug targeting technology, and  $BacV^{TM}$ , a new vector and potential functional genomics platform. In addition, the Group is conducting research and development programmes based around vascular biology and growth factors.



Ark's strategy has been to select products that it can take through development within its own means so retaining value and greater control of clinical development. Rights to market its products in the US and EU are still owned by the Group.

## 3 ARK'S CAPABILITIES AND PLANS

#### 3.1 Management

Ark has an experienced management team that appears to have the appropriate skills for their roles. Most of the Company's senior management has a background in the pharmaceutical industry and they have had considerable experience of clinical development, product commercialisation and corporate finance.

#### 3.2 Research and Development

Early research is undertaken through teams led by the Group's founding scientists at the Centre for Cardiovascular Biology and Medicine, UCL and the Department of Biotechnology and Molecular Medicine, AI Virtanen Institute, Kuopio.

CCL has been informed that Ark has a facilities agreement for research laboratories at UCL where it has access to state-of-the-art-serviced facilities. Laboratory facilities for gene-based medicines are leased from the University of Kuopio in Finland where *in vivo* models and facilities for early preclinical pharmacology and toxicology are available.

Ark has an independent Scientific Advisory Board (SAB) whose role is to advise on scientific and technical aspects of the Group's programmes. This SAB brings a range of expertise along the drug development value chain from research through development, including toxicology and regulatory issues.

#### 3.3 Clinical and Regulatory Affairs

The Group's strategy is to develop product candidates in areas of high unmet clinical need and specialist medicine. This provides opportunities to gain Fast Track Designation in the US and where possible, based upon the size of the available patient population, to seek Orphan Drug Status in both the US and Europe. The benefits of these are expected to include expedited development programmes as well as fee waivers and marketing exclusivity in the case of orphan drugs. CCL notes that by working in areas of specialist medicine with products with Orphan Drug Status, clinical trial sizes are potentially smaller than in non-specialist areas.

Management of the Group's clinical studies is resourced through a small in-house team of clinical managers working with clinical research organisations (CROs). Regulatory services are provided by a CRO based in the UK, with strategic US advice and 'Resident Agent' services provided by a specialist US consultancy and a law firm. In CCL's view, this is an appropriate approach for the Group.

#### 3.4 Manufacturing

Subject to the necessary regulatory approvals, Ark should be positioned to manufacture its lead gene-based products, Cerepro<sup>™</sup> and Trinam®, by using in-house facilities. CCL understands that Ark leases space for two GMP suites from Kuopio University. Under the centralised procedure of the European Agency for the Evaluation of Medicinal Products (EMEA) Committee on Proprietary Medicinal Products (CPMP), approval by the Finnish National Agency of Medicines (FNAM) will allow manufacture for European supply. FNAM must license Ark's facilities for the GMP manufacture for Phase III clinical trials before Ark can manufacture for its proposed gene-based pivotal studies. Ark will have to address by separate certification the FDA requirements for manufacture for the US, including Phase III trials.

The existing facility was licensed to manufacture injectable gene transfer solutions for Phase I and II trials. Since Q1 2003 the Group has been upgrading the facility to enable manufacture for Phase III. In Q3 2003, whilst Ark was upgrading the facilities, its GMP facility was inspected by FNAM to review the activities reported by the Group in its notifications for its existing licence. The Group cannot manufacture for



Phase III until it has completed the upgrade, addressed shortcomings that were identified during the inspection and been awarded its new licence from FNAM. This will require a new inspection by FNAM. Ark was already working towards the validation of the facility prior to the FNAM inspection and we understand that FNAM has reviewed the Group's upgrade plans and CCL notes that the Group is maintaining a working relationship with FNAM. The Group plans to meet regulatory requirements for Phase III supply during H1 2004.

In 2003 Ark accelerated the recruitment of staff for the Kuopio facility and, in addition, contracted a validation and regulatory compliance consultancy for the provision of experienced validation consultants. CCL considers that Ark has now put in place the levels of staff required to prepare the facility for inspection by FNAM.

Ark is currently directing efforts towards ensuring that the Kuopio facility meets both the US and the European requirements. When a European marketing authorisation is applied for, an inspection to confirm GMP compliance for commercial supply is probable. On submission of a New Drug Application (NDA) to the FDA for either Cerepro<sup>™</sup> or Trinam<sup>®</sup>, the FDA is likely to perform a pre-approval inspection of the Kuopio facility. Ark has used and is continuing to use consultants to advise on the requirements for FDA compliance. CCL considers Ark's current focus on manufacturing requirements to be appropriate given its resources and development timelines.

## 3.5 Sales and Marketing

In the US and in selected countries in Europe, Ark intends to market the majority of its lead products either alone, targeting the main centres of excellence, or to enter into a co-promotion agreement with an established company as a partner. In the former scenario, Ark will either recruit these sales forces itself or use contract sales organisations. The intention is to out-license in other countries. CCL considers that this strategy will retain value for Ark and is appropriate for niche markets, as several of Ark's products could be sold into specialised centres.

#### 4 PRODUCTS

## 4.1 Cerepro<sup>™</sup>

## 4.1.1 Product merits

Malignant gliomas, tumours which arise in the glial (supportive) tissue, comprise more than half of all primary brain tumours and are associated with significant morbidity and mortality. The prognosis for patients with current standard treatments is poor.

Cerepro™ is a gene-based medicine in which the herpes simplex thymidine kinase (HSV-tk) gene is carried by a replication-deficient adenovirus. Following surgical resection of the tumour mass, Cerepro™ is injected into the healthy tissue surrounding the tumour cavity by a series of multiple injections. A few days later a prodrug, ganciclovir, is administered intravenously on a regular basis for up to two weeks. By injecting the HSV-tk into the brain tissue, the brain cells surrounding the tumour cavity can produce the viral thymidine kinase enzyme. This enzyme converts ganciclovir to an active form, toxic to replicating cells, i.e. remaining dividing tumour cells. The healthy brain cells surrounding the tumour are non-dividing and therefore should not be susceptible to the toxic compound. In addition, a bystander effect appears to occur whereby dividing cells in the region of a cell producing HSV-tk can be killed, thus it may only be necessary to transfect a proportion of the brain cells.

Treatment with Cerepro™ is as an adjunct to current standard surgical procedures.



#### 4.1.2 Clinical status

Cerepro<sup>™</sup> has completed two safety and efficacy studies (902 and 903) and a corroborative study (904) is in planning. This study has been discussed with the EMEA and is scheduled to start at the end of 2004 in Europe.

Ark has been granted Orphan Drug Status in the US for Cerepro<sup>™</sup> for the treatment of malignant glioma. Cerepro<sup>™</sup> has also been designated an Orphan Medicinal Product in Europe for the treatment of high-grade glioma.

An initial clinical trial, study 901, in 12 patients awaiting surgery for glioma compared the effectiveness of adenovirus and retrovirus mediated transfer of a marker gene. The conclusion of this study was that the adenoviral vector was generally more efficient in gene transfer and that multiple injections into brain tissue would be required.

Study 902 was an open label study comparing retrovirus mediated HSV-tk with adenovirus mediated HSV-tk (Cerepro<sup>TM</sup>) in 14 patients with operable primary or recurrent glioma. Beginning from five days after surgery, ganciclovir was administered intravenously for a total of 14 days. These patients were compared with a historical control group of seven patients from study 901 transfected with either retroviral or adenoviral mediated marker gene. Median survival times were 8.3 months for the control group, 7.4 months for the retrovirus group and 15.0 months for the adenovirus group (Cerepro<sup>TM</sup>).

Study 903 was an open, single-centre, randomised, standard-of-care controlled study conducted in 36 patients with operable primary or recurrent high-grade glioma. The study was blinded until the point of treatment allocation. In the experimental intervention arm, Cerepro<sup>TM</sup> and ganciclovir were administered as in study 902. The outcome with respect to the primary endpoint, re operation free survival (RFS) was positive, median RFS 62 vs 38 weeks and mean RFS 71 vs 39 weeks p=0.0095. CCL notes that the magnitude of effect is large with an 81 per cent. increase in mean survival and 65 per cent. increase in median survival. Overall survival was significantly increased (median 62 vs. 45 weeks, p=0.026) in the Cerepro<sup>TM</sup> group. During the extended period of life there was no increased dependency on concomitant medication and quality of life was maintained. Study 903 also confirmed the tolerability and safety of Cerepro<sup>TM</sup> in this group of patients as assessed by the number and nature of serious adverse events.

A 'Protocol Assistance Meeting' regarding a corroborative study, 904, was requested with the CPMP of the EMEA and advice received. The CPMP confirmed that the clinical development programme was logical and well thought out but the number of patients in individual studies was limited. The results of study 903 were considered 'promising' and the EMEA commented on the apparently large treatment effect. The proposal to conduct a corroborative study was strongly supported and the CPMP agreed that from a licensing perspective demonstrating superiority versus standard-of-care is adequate. An additional toxicology and biodistribution study to supplement the existing toxicology work was agreed.

Study 904 is scheduled to start at the end of 2004. This is an open, multicentre (Europe and Israel), controlled study designed to recruit up to 250 patients randomised either to Cerepro<sup>™</sup> as an adjunct to standard therapy or to standard therapy alone with no gene therapy or ganciclovir. An initial analysis is planned for H1 2006. A further analysis is planned for H2 2006 though the follow-up of all patients will continue with a possible final analysis scheduled for H2 2007.

In Europe, Ark is considering a Marketing Authorisation Application (MAA) in H2 2004 based upon the available clinical data and once toxicology and manufacturing work is complete. The Group would make this application in an effort to gain early marketing approval under 'exceptional circumstances' based upon the orphan indication, the unmet medical need in this condition and the strength of the treatment effect apparent from studies 902 and 903. If the existing data are not adequate, then the first analysis of study 904 may provide the required additional data, though it is possible that one or both of the further analyses may be necessary. CCL considers that this strategy has merit.



In the US, Ark plans an end of phase II meeting with the FDA in H2 2004 once the package of manufacturing and toxicology data is available. If the FDA require it, study 904 may provide additional data for a Biologics License Application (BLA) submission in 2008, though clearly this strategy will be subject to FDA review at the meeting.

In summary, results with Cerepro<sup>™</sup> to date are encouraging and the European regulatory authority has commented on the apparently large treatment effect. Ark's consideration of an MAA submission in H2 2004 seems reasonable given the results, the orphan indication and the unmet need but the limited patient numbers in studies 902 and 903 may hinder approval at this time. If the regulatory authority considers more clinical data are necessary for approval, the first analysis of study 904 in H1 2006 may provide the confirmatory efficacy required. Prudently, Ark's existing business plan assumes a first filing for regulatory approval in 2007.

## 4.1.3 Manufacturing

Cerepro<sup>™</sup> is manufactured by Ark at the facility in Kuopio, Finland.

Ark contracted a contract manufacturing organisation (CMO) to produce and test a new Master Cell Bank and Master Virus Seed Stock for Cerepro™. These stocks can be used for the manufacture of future clinical material by the Group in Finland. Duplication of the existing manufacturing process should provide sufficient capacity for trials and early launch, assuming that the projected yields are attained and production runs are tightly scheduled. Filling is currently subcontracted until the Group's filling suite is complete and validated.

There have been some changes in the manufacturing process since the material was manufactured for studies 902 and 903. Ark has agreed *in vitro* comparability studies with the EMEA.

In the Protocol Assistance Meeting with the EMEA, Ark raised several chemistry, manufacturing and control (CMC) related questions. Although the CPMP agreed in general with Ark's proposed approach, it noted some requirements for further supporting information and identified where future assay development may be warranted. Ark needs to satisfy the regulatory authority with respect to these issues.

Ark is currently focused on manufacturing Cerepro<sup>™</sup> to meet European needs and requirements. However, the validation of the Kuopio facility is being planned to meet both FNAM (for the EU) and FDA compliance and Ark intends to manufacture Cerepro<sup>™</sup> to meet the US recommendations. Ark has yet to hold discussions with the FDA concerning the manufacture for the US although CCL notes that the Company intends to contact the FDA in H2 2004 once the manufacturing documentation is complete.

To meet sales projections (EU and US) one year post launch, scale up to a bioreactor process may be needed. Material from a bioreactor process will need to be shown to be comparable to the current flask process requiring a comparability study. CCL considers that it is feasible for Ark to complete the required process development in the planned time. Alternatively, Ark could seek to procure additional GMP production space to expand capacity for the existing flask-based process.

Ark's ability to manufacture Cerepro<sup>™</sup> is dependent on receiving the manufacturing licence from FNAM for the GMP1 suite in the Kuopio facility. Ark plans that this should be in H1 2004 and we understand from the Group that it believes it is on schedule to achieve this. CCL considers that Ark should be capable of GMP compliant manufacture of Cerepro<sup>™</sup> once the GMP1 facility is approved.

#### 4.1.4 Market potential

It is anticipated that Cerepro<sup>™</sup> will be used in the treatment of operable high grade primary and recurrent glioma as an adjunct to standard treatment (surgery and radiotherapy).

There is an annual incidence of 17,000 primary malignant brain tumours in the US encompassing several types of brain tumour. This includes a total of over 10,000 cases per annum of two types of high-grade



glioma (anaplastic astrocytoma and glioblastoma multiforme). In the EU, it is estimated that the incidence of high-grade glioma is over 14,000 cases per annum.

Treatment of malignant glioma varies from country to country with 70 per cent. to 80 per cent. of patients undergoing a first surgery to remove the tumour as far as possible. Patients with a recurrent tumour may then undergo further surgery. Including both primary and recurrent gliomas, there are up to an estimated 25,000 surgical procedures per annum in the US and Europe for anaplastic astrocytoma and glioblastoma multiforme.

The market potential for Cerepro<sup>™</sup> will depend on clinical efficacy, side effect profile, ease of administration, time to market and confirmation that Cerepro<sup>™</sup> results in a significant increase in life expectancy compared to other therapeutic approaches. As a comparison, in 2002 sales of Temodar® (Schering Plough Corp.) an oral treatment for certain malignant gliomas were \$324m. Cerepro<sup>™</sup> is being developed for a broader indication than Temodar®. Temodar®, taken in monthly cycles until treatment progresses, costs around \$2,000 per cycle.

Gliadel® Wafer (Guilford Pharmaceuticals Inc.), a cytotoxic locally implanted into the tumour cavity at the time of surgery, costs around \$13,800 per patient.

#### 4.1.5 Competitive position

Malignant glioma is currently treated through combinations of surgery, radiotherapy and chemotherapy. However, these approaches generally have limited efficacy with side effects and quality of life issues.

A notable product in this area is Temodar®, an oral cytotoxic agent able to cross the blood brain barrier, approved for recurrent or progressive malignant glioma in the EU. It is approved for recurrent anaplastic astrocytoma in the US, but was not approved for use in recurrent glioblastoma multiforme. The incidence of glioblastoma multiforme is approximately six-fold that of anaplastic astocytoma. Phase III programmes in newly diagnosed glioblastoma and anaplastic astrocytoma are ongoing.

Gliadel® Wafer is approved in the US for newly diagnosed high grade malignant glioma and for recurrent glioblastoma multiforme. Clinical studies in newly diagnosed patients showed a median increase in survival of 2.3 months. Currently approved for use widely across the EU for recurrent glioblastoma, Guilford withdrew its regulatory application in Europe for an expanded indication for use in initial surgery in late 2002 but now anticipate receiving marketing authorisation during 2004.

There are a number of competing products in clinical development for operable malignant glioma, including those shown in Table 1 which summarises products in Phase III development and those products in Phase II which have reported results in glioma patients.

Table 1 Products in Phase II/III clinical trials for resectable malignant glioma reporting results

Company	Product Type and Route of Administration	Tumour Type	Status	Comments
Phase III				
Merck and Co	Edotecarin; IV injection; topoisomerase I inhibitor	Recurrent glioblastoma	Phase III (announced initiation late 2003)	In collaboration with Pfizer



Company	Product Type and Route of Administration	Tumour Type	Status	Comments
NeoPharm Inc.	IL-13-PE38; interleukin-13 fusion toxin administered intratumourally before tumour resection or peritumourally after resection	Recurrent glioblastoma multiforme	Pivotal Phase III studies planned to start Q1 2004. 300 patient protocol agreed with FDA	Treated more than 75 patients in four Phase I/II studies
Phase II				
Antisense Pharma GmbH	AP-12009; intratumourally, antisense therapy, targeted to transforming growth factor-β2	Recurrent high-grade glioma	Phase II ongoing, expect to enrol 150 patients in Western and Eastern Europe, India and Israel	In three Phase I/II studies in operable and inoperable patients 6/18 patients had stable disease and one complete response. In patients receiving temozolomide before AP-12009, median overall survival was 106.4 weeks compared to 42 weeks with temozolomide alone in patients with anaplastic astrocyloma <sup>(1)</sup> , and 46.1 weeks as compared to 32 weeks in glioma patients
Crusade Laboratories Ltd	HSV-1716; modified herpes simplex virus	Glioblastoma	Phase II pending	39 glioma patients treated in 4 clinical trials
IVAX Corp.	TP-38; intratumoural via catheter following resection; immunotoxin	Recurrent glioblastoma multiforme	Phase II ongoing, plans to enrol 56 patients	Phase I safety study completed Dec 02
Johnson & Johnson	Zarnestra®; oral; farnesyltransferase inhibitor	Recurrent glioma	Phase II ongoing	In trial of 33 patients, partial response in 3 patients, 2 had stable disease >6 months and 15% were progression free at 6 months

<sup>(1)</sup> Details of patient numbers have not been disclosed and it should be noted that the median survival of patients with anaplastic astrocytoma is around three years.



Company	Product Type and Route of Administration	Tumour Type	Status	Comments
MGI Pharma Inc.	Irofulven; IV; acylfulvene compound	Recurrent malignant glioma	Phase II ongoing	Preliminary data showed stable disease with evidence of symptomatic improvement in some patients
OSI Pharmaceuticals Inc.	Erlotinib (Tarceva <sup>™</sup> ); oral; small molecule inhibitor of epidermal growth factor receptor	Recurrent or progressive malignant glioma	Phase II ongoing	Phase I in 49 glioblastoma patients gave 8 partial response and 11 stable disease. Partnered with Genentech and Roche
TransMolecular Inc.	intracavitary; (synthetic scorpion venom peptide conjugated with <sup>131</sup> I)	Recurrent glioma	Phase II was scheduled to begin late 2003	Phase I/II in 18 patients completed enrolment in 2003
Wyeth	CCI-779; intravenous; cell cycle inhibitor	Recurrent malignant glioma	Phase II ongoing	Well tolerated in Phase I dose escalation study in 25 patients

Additionally, Ethypharm SA, Neurocrine Biosciences Inc. and Peregrine Pharmaceuticals Inc. have each completed Phase II trials with malignant glioma products. However, each of these companies has reported that further clinical development of its product is dependent on partnering agreements.

Both Genopoietic SA, and Avigen Inc. were also developing HSV-tk gene therapy products, but based on vectors other than adenovirus, for glioma. However, it is not clear that development on these products is continuing and there have been no reports on progress in these programmes for at least three years.

Cerepro<sup>™</sup> has given encouraging results in clinical trials and is at a more advanced stage of clinical study than reported for many competing approaches, several of which are yet to publish data on glioma patients. Furthermore, Cerepro<sup>™</sup> is in development for the treatment of patients with primary or recurrent glioma whereas several of the competing products are in trials only for recurrent glioma.

#### 4.1.6 Risk factors

There are a number of product specific risk factors, which may impact on Ark's ability to meet its business plan for  $Cerepro^{TM}$  including:

- The efficacy data available to date come from two studies conducted at the same centre in Finland.
   The EMEA has confirmed that Ark's proposal to conduct a multicentre confirmatory study is wise.
   There is a risk that this study will fail to confirm previous results.
- The Group may not complete the required work for the manufacturing licence for the Kuopio facility within the proposed schedule since there is no allowance for contingency. This would impact the supply of material for study 904 resulting in some timeline slippage. If Ark decides to file for marketing authorisation early, the submission of this filing would be delayed by a few months.
- Prior to the regulatory submission for study 904, or an early submission for marketing authorisation, Ark needs to conduct comparability studies and an additional toxicology and biodistribution study.



These studies may not give the expected results or may take longer than anticipated leading to timeline slippage.

- Limited communication has taken place with the FDA on Cerepro™; therefore the clinical and manufacturing plans for the US may need to be changed, possibly impacting both budgets and timings. However, we understand that Ark uses consultants to advise on potential FDA manufacturing requirements.
- If Ark files early and is awarded an MAA under exceptional circumstances, this could hamper recruitment of remaining patients into study 904 in Europe. Availability of approved Cerepro<sup>™</sup> could hinder or terminate recruitment into a study where some patients are denied Cerepro<sup>™</sup>, as this would be unethical. However, Ark's proposed timings are such that the majority of patients are scheduled to be recruited before this point.
- Cerepro<sup>™</sup> is in development for operable high grade glioma. However, not all such cases may be suitable for Cerepro<sup>™</sup> so reducing the potential market size.

## 4.2 Vitor<sup>TM</sup>

#### 4.2.1 Product merits

There is an unmet need in the management of cachexia, the involuntary loss of body cell mass or fat free mass with or without weight loss, a common complication of advanced cancer and a major contributor to morbidity and mortality in cancer patients. Weight loss is one of the main observations in patients with cancer cachexia; this affects patients' ability to tolerate cancer therapy. Patients with cachexia may be more prone to adverse effects of treatments such as surgery, radiotherapy and chemotherapy.

Cytokines appear to have a significant role in cancer-associated wasting and may contribute to protein breakdown and muscle wasting. Proinflammatory cytokines reported to play a direct role include interleukin-1- $\beta$ , interleukin-6 and tumour necrosis factor- $\alpha$  (TNF). Angiotensin II, activated by an enzyme blocked by angiotensin converting enzyme (ACE) inhibitors such as Vitor<sup>TM</sup>, increases the production of cytokines linked to the inflammatory response. Research by the Group has shown that Vitor<sup>TM</sup> alters the ability of mitochondria to produce cellular energy. Therefore it is premised that through the ability to interfere with angiotensin stimulation of cytokine activity, a positive effect on cellular energy and blocking protein breakdown in muscle cells, muscle function may be improved. This is supported by findings and observations from a number of areas of research, including:

- preclinical studies of Vitor<sup>™</sup> in an in vivo model of cachexia;
- in vitro studies that show Vitor<sup>™</sup> blocks muscle protein degradation; and
- observations that patients suffering from chronic diseases associated with cachexia have elevated plasma levels of Angiotensin II.

The drug substance in Vitor™ is an ACE inhibitor approved for the treatment of hypertension in several countries (currently excluding the US), at higher unit doses than used in Vitor™. Consequently a full toxicology and clinical dossier is available and with some reformulation work this has enabled Ark to proceed directly to a Phase III trial.

Whilst the effect of the active ingredient on hypertension is primarily related to the level in plasma, the metabolic effects are probably related to activity in the tissues rather than plasma. Vitor™ is a highly lipophilic compound enhancing its penetration in tissues. The reformulated product and dosing regimen proposed for study by Ark is designed to be sub-hypotensive.



#### 4.2.2 Clinical status

Vitor<sup>™</sup>, an oral therapy, is currently in a Phase III clinical trial under an IND in the US, a clinical trial exemption in the UK and a clinical trial application in Canada. Vitor<sup>™</sup> has been awarded Fast Track Designation by the FDA.

At the pre-IND meeting, the FDA indicated that existing data on chemistry, pharmacology, and the preclinical studies for the active ingredient in Vitor<sup>TM</sup> appear adequate for clinical studies and, once the additional formulation work together with a pharmacokinetic study has been undertaken, these should be adequate for an NDA submission.

In a recent study, the effect of ascending doses of Vitor<sup>TM</sup> has been evaluated in an *in vivo* model of cachexia. Preliminary results showed that at the higher dose, there was approximately 60 per cent. less weight loss than in the controls. There was also some evidence that  $Vitor^{TM}$  had a possible effect on stabilising tumour volume and improving survival. At a lower dose of  $Vitor^{TM}$ , there was no evidence for an effect of  $Vitor^{TM}$  on body weight or tumour volume. Although these results should not be assumed to provide any confirmation that  $Vitor^{TM}$  at the doses proposed in humans is effective, the results seem encouraging as CCL understands that few compounds have shown activity in this model of aggressive cachexia.

A Phase III trial commenced in December 2001. The study met with recruitment difficulties and an application was made to the FDA to revise the protocol, with the amended protocol for the current study submitted in June 2003. The revised protocol requires 160 patients. The primary efficacy variable is change in body weight from baseline with change in lean body mass and muscle strength (hand grip) as secondary variables. In addition, Ark is now including centres in the UK and Canada in the trial and approvals for the trial from the relevant regulatory authorities have been received.

Two Drug Safety Monitoring Board (DSMB) meetings had been held by December 2003. The DSMB did not have concerns. It was noted that so far the study has demonstrated that Vitor<sup>™</sup> does not cause hypotension (low blood pressure).

The study is due to complete in H2 2004. As of January 2004 58 patients had been recruited into the study. It is planned that this Phase III will be a single pivotal study for national submission in Europe H1 2005 and subsequent mutual recognition. The active ingredient of Vitor™ is already approved in several European countries; therefore it is intended that this submission will be as a line extension. In CCL's opinion, these timings are feasible.

The FDA recommends two clinical studies to support an NDA. With Fast Track Designation, however, it may be possible to gain approval in the US based on a single efficacy study. Wisely, Ark's plan assumes a second Phase III study to support a US regulatory filing in 2007.

To support the US regulatory submissions additional pharmacokinetics and bioequivalence studies in healthy subjects and kinetics in patients are planned. *In vitro* studies of drug interaction potential are also planned.

#### 4.2.3 Manufacturing

The active ingredient for  $Vitor^{TM}$  is produced by the Japanese originator of the drug.  $Vitor^{TM}$  for trials to date has been manufactured under contract by an established international company based in the UK.

## 4.2.4 Market potential

Whilst on average cachexia manifested as weight loss is present in over 50 per cent. of cancer patients during treatment, the frequency in some cancers approaches 90 per cent. Cachexia is most common in gastric, pancreatic and non-small cell lung cancer. With a total of 1.33 million new cancer cases diagnosed per annum in the US, and taking the incidence of different cancers into account it is estimated that over 700,000 cancer patients may suffer from cachexia. In Europe the incidence of cancer is 1.60 million cases leading to a



projected 870,000 patients with symptoms of cachexia. This represents a sizeable target patient population. If clinical benefit is demonstrated, patients could be prescribed  $Vitor^{TM}$  for several months from onset of cachexia until death or recovery.

## 4.2.5 Competitive position

CCL has been unable to identify any products approved for the treatment of cancer cachexia. Current approaches to ameliorating the symptoms of cachexia include dietary supplements, progesterones and steroids but these have limited effect.

Megestrol acetate (Megace®, Bristol Myers Squibb Company) and medroxyprogesterone acetate are established drugs for increasing appetite and reversing weight loss in cancer patients; efficacy has been evaluated in at least 15 clinical trials. These drugs function as appetite stimulants but studies report that weight gain is primarily fat. Megace® is approved for Acquired Immune Deficiency Syndrome (AIDS)-related cachexia.

Corticosteroids give some effect on appetite, food intake and feeling of well being but they are also catabolic agents that increase muscle breakdown so they are usually used for cachexia late in the disease process and for short time periods. Most clinical studies have not shown significant gain in body weight.

Oxandrin® (Savient Pharmaceuticals Inc.), an oral anabolic steroid, is approved as an adjunctive therapy for the promotion of weight gain following weight loss due to extensive surgery, chronic infection, severe trauma or unknown pathophysiology. In 2003, results were announced of an open label clinical study in 131 patients with cancer that showed that the treatment resulted in weight gain and increase in lean tissue weight.

Two anti-TNF products, approved for use in other indications, are in clinical trials for cachexia in the US: Infliximab (Centocor Inc.) commenced a Phase II study in 2003 and Etanercept (Amgen Inc.) is in a National Cancer Institute sponsored Phase III study. However, even if successful in the clinic, the cost of these products is likely to limit their use in cancer cachexia. Centocor Inc. is also reported to be developing CNTO-328, an anti-IL-6 monoclonal antibody, that is in preclinical development for cachexia.

An appetite stimulant, PH284, from Pherin Pharmaceutical Inc. is in preparation for an IND in the US. A Phase II study in cachectic patients with terminal cancer showed a broad safety profile and a rapid weight gain.

GTx Inc. intends to commence a Phase II study with Andarine, an oral selective androgen receptor modulator, for the treatment of cachexia from non-small cell lung cancer in the first half of 2004. Three Phase I studies testing safety and tolerance have been completed in healthy volunteers.

Omega 3 fatty acids have been evaluated in trials and can help maintain lean body mass in some cancer patients. Other compounds that have been evaluated include thalidomide (Celgene Corp.) and adenosine triphosphate. Whilst there are also other products approved or in trials for the cachexia associated with AIDS, these are not currently reported to be in trials for the cachexia of cancer.

## 4.2.6 Risk factors

There are a number of product specific risk factors that may impact on Ark's ability to meet its business plan for Vitor<sup>TM</sup> including:

- Cancer cachexia is a complex multi-factorial metabolic disturbance that is not fully understood.
   Although Vitor™ is in a Phase III trial in this indication, since it was not necessary for Ark to undertake a Phase II study, there is no previous human efficacy data for Vitor™ in cancer cachexia.
- If Vitor<sup>™</sup> is successful, it is possible that ACE inhibitors may be tried 'off label' and some erosion of market share may be seen over time. However, the hypotensive effects of ACE inhibitors are primarily related to the level in the plasma whereas Ark believes the metabolic effects are related to the activity in tissues.



Cancer patients are prescribed a wide range of drugs and therefore potential drug interactions of Vitor™ will require consideration. The drug may not be effective for all patient groups and this would reduce the potential market available for Vitor™. However, the DSMB have reviewed the serious adverse events in the ongoing trial and no concerns have arisen.

#### 4.3 Trinam®

#### 4.3.1 Product merits

Some patients requiring haemodialysis for end stage renal disease have a synthetic arteriovenous haemodialysis access (AVHA) graft inserted in the arm to link an artery and a vein into which needles carrying blood to and from the dialysis machine can be inserted regularly. Within a year over 60 per cent. of AVHA grafts suffer permanent failure or intervention is needed to restore access function. Stenosis or overproliferation of the smooth muscle cells at the graft-vein anastomosis (junction) site leads to reduction in the lumen of the graft. The majority of grafts fail due to intimal hyperplasia and ultimately thrombosis. The costs of creating and maintaining vascular access for haemodialysis are substantial: estimates suggest that it is in excess of \$900 million per annum in the US. Consequently there is a high unmet need for a treatment that will prevent or reduce the failure of these grafts.

Trinam® is under development to address this need and consists of two main components:

- a solution of the gene for vascular endothelial growth factor (VEGF) in a replication deficient adenoviral vector; and
- a biodegradable collagen collar device for local delivery and collagen based glue.

Studies by Ark's scientists and others suggests that VEGF has a 'vascular protective' role. For example, from peer reviewed research it appears that VEGF activity enhances endothelial functions that mediate the inhibition of vascular smooth muscle cell proliferation.

The Trinam® product is designed to be incorporated into existing surgical procedures for AVHA graft insertion. The collagen collar is fitted around the graft-vein anastomosis and sealed in place with collagen-based glue. The VEGF gene solution is then injected into the reservoir between the collar and the blood vessel. The collagen collar is designed to act as a reservoir delivery device that provides targeted local delivery of the VEGF solution to the site of the graft-vein anastomosis. Ark has demonstrated through *in vivo* studies that the delivery device localises the gene to the target tissue and that it substantially reduces the systemic distribution. The collar device is biodegradable and *in vivo* studies have shown that degradation is complete within 60 days of placement.

#### 4.3.2 Clinical status

An IND for a Phase II study with Trinam® in the US was approved by the FDA in 2003 and Trinam® has been granted Orphan Drug Status in the US.

An initial, open, non-randomised Phase I clinical trial was completed in Finland with a VEGF gene and a liposomal formulation that demonstrated successful adventitial transfection of human arteries is achievable using a collagen collar device for gene delivery.

Preclinical efficacy and safety have been assessed in a number of *in vivo* models. More recently Trinam® was evaluated in a toxicology study designed in discussions with the FDA. Analysis of the haematological and biochemical parameters showed that there were no adverse events associated with Trinam® gene transfer. Results from an *in vivo* model of haemodialysis access surgery showed delayed graft blocking by intimal-hyperplasia and thrombosis in the Trinam®-treatment groups and that expression of the therapeutic agent was limited to the site of the anastomosis.

In 2001, the RAC endorsed a protocol for a Phase IIb trial in approximately 210 patients, subject to various observations and recommendations that must be responded to when the trial commences.



Trinam<sup>®</sup> is a combination product, consisting of the biologic, VEGF, and a collagen device. Center for Biologics Evaluation and Research (CBER) will be the lead authority in the FDA, with advice on the collar sought from the Centre for Devices and Radiological Health.

The Phase II study in up to 20 patients, will evaluate the safety and efficacy of Trinam® in stenosis prevention in patients who require vascular access for haemodialysis and, will be conducted at a single site in the US. This study is an open label, controlled, ascending dose study of two dose levels with a one-time treatment administered at the time of surgery for the individual patients.

The endpoints for this study are:

- · mean change from baseline to 6 months after surgery in access flow rate; and
- percent stenosis at 6 months after surgery at the area of greatest narrowing of the graft-vein anastomosis.

Final ethics approval has recently been given and the first patient is expected to be recruited in early 2004 with final results scheduled for the end of 2004. Ark plans that if the results are satisfactory this will lead to a Phase III study scheduled to commence in H1 2005 which should be the pivotal study for filings for marketing authorisations in 2007.

In Europe, Ark submitted an application for Orphan Drug Status in early 2004. It is also planned to request a protocol assistance meeting which will clarify preclinical and manufacturing requirements for registration in Europe as well as establish Phase III study requirements. In Europe, the applications for the device may need to be separate national applications (i.e. country by country) whereas, as a biological, the gene therapy will be a centralised application for Europe through the EMEA.

#### 4.3.3 Manufacturing

A CMO manufactured the Master Cell Bank, the Master Viral Seed Stock and two batches of VEGF gene in the adenoviral vector for use in the Phase II trial.

Ark intends that further manufacture will be in-house in Kuopio in the second suite, GMP2. This suite will need to have been inspected and approved by FNAM prior to manufacture for Phase III trials. Ark currently plans that approval of GMP2 will be in H2 2004. CCL regards this timing as feasible.

Ark has sufficient material to complete the planned clinical trial; however, manufacture of further material will be required should Trinam® meet with success in the clinic. Ark recognises that product yield from the cells using the current process is low and the process will need to be transferred to bioreactors. Consequently, process development work has been initiated. In addition, the purification process also requires significant development. A comparability study will be necessary to show the material produced by any new process is bioequivalent to that to be used in the Phase II trials.

The Group recognises there is a risk that transfer of production to bioreactors may not be successful or may take longer. Ark has currently allocated until H1 2005 for the development. In addition to satisfying the process economics, the new bioreactor and purification process will need to result in product that meets the FDA's specifications for adenoviral gene therapy products. CCL believes that the process development timelines are ambitious. However, reports by others confirm that adenoviral gene-based medicines can be manufactured in bioreactors although Ark's ability to meet the FDA's adenoviral gene therapy requirements with such material remains to be proven.

Manufacture of the collagen collars and collagen-based glue, is understood to an established designer and manufacturer of implantable medical devices.

## 4.3.4 Market potential

In 2001, there was a prevalence of 265,000 haemodialysis patients in the US, growing at over 4 per cent. per annum. 44 per cent. of these patients had an AVHA graft. Including both grafts for new patients



undergoing haemodialysis and new grafts for patient who have had a previous access graft which has now failed, there are an estimated 90,000 AVHA grafts fitted per annum in the US.

There is an estimated prevalence of 140,000 haemodialysis patients in the EU. However, only approximately 10 per cent. of prevalent patients in the EU are fitted with an AVHA. Including both grafts for new patients undergoing haemodialysis and new grafts for patients who have had a previous access graft, there are an estimated 10,000 AVHA procedures per annum in the EU.

The main alternative to a synthetic AVHA graft is an arteriovenous fistula (AVF) that is surgically created from the patient's endogenous vasculature AVFs are less prone to failure and complications than AVHA grafts. In 1997 the US National Kidney Foundation set the goal that primary AVF should be constructed in at least 50 per cent. of all new kidney failure patients receiving haemodialysis. Following this, the percentage of US haemodialysis patients with an AVHA graft has decreased from 52 per cent. to 44 per cent. between 1999 and 2001. However, an AVF can only be created in a patient with suitable vasculature and thus is less suitable for some patient groups, for example some elderly and diabetic patients. There is a maturation period which delays the use of the AVF. Synthetic grafts have benefits, for example, ease of cannulation, and shorter maturation times before they can be used for dialysis. If Trinam® improves the patency of AVHA significantly showing an economic benefit, and a reduced failure rate then some move from the use of fistulas towards AVHA grafts is likely.

The presence of a functioning vascular access site is a critical factor in the well-being of haemodialysis patients but it is also the largest single cause of illness and disability in these patients accounting for nearly 25 per cent. of all hospitalisations in this group. In the US, it has been estimated that vascular access morbidity costs around \$8000 per patient year at risk. The price that Trinam® would be able to command will depend on the improvement in graft patency, the resulting cost saving to healthcare providers and the improved quality of life for the patient.

#### 4.3.5 Competitive position

There is a high unmet need for improved patency in vascular access grafts. Approaches in development include:

- Corgentech Inc. intends to initiate a 60 patient placebo-controlled Phase I/II trial to investigate the use of E2F Decoy, an oligonucleotide, to prevent the failure of AVHA grafts in H1 2004. The FDA has reviewed the protocol and Corgentech is proceeding with the trial. In an *in vivo* surgical model E2F Decoy showed statistically significant improvement in patency compared to placebo at five weeks. E2F Decoy has been granted Fast Track status in this indication. Corgentech has a worldwide collaborative agreement with Bristol-Myers Squibb Company for the development and commercialisation of E2F Decoy in all indications and the product is currently in Phase III development for the prevention of vein graft failure following coronary artery bypass graft and peripheral artery bypass graft surgery. In these procedures, however, E2F Decoy is applied to vein grafts under pressure *ex vivo*: a process that appears to need modification for the AVHA application.
- Miravant Medical Technologies Inc. announced that two preclinical studies showed that PhotoPoint<sup>™</sup> photodynamic therapy significantly inhibited cell proliferation in a synthetic vascular access graft failure model.
- Angiotech Pharmaceuticals Inc. and C.R. Bard Inc. were developing paclitaxel wraps for the
  perivascular treatment of stenosis associated with vascular surgery. Although focused on the
  restenosis that occurs after cardiovascular stenting, they had also intended to evaluate the use of
  paclitaxel wraps in haemodialysis patients with synthetic grafts. Angiotech and C.R. Bard recently
  terminated their agreement; Angiotech has stated that it intends to continue to develop the product.

An alternative approach may be supplementing the diet with fish oil. A double blind randomised trial in 24 patients with newly constructed synthetic grafts who received fish oil or control oil daily in their diet gave



favourable results. The primary patency rates at one year were 14.9 per cent. for the control group and 76 per cent. for the fish oil treated group. However, this was a small study at a single centre.

Aggrenox® (Boehringer Ingelheim GmbH) an antiplatelet agent, is in a Phase III trial, sponsored by the National Institute of Diabetes and Digestive and Kidney Disease (NIDDK), in haemodialysis patients with grafts to determine if it prevents stenosis. Unlike Trinam®, this product is not addressing the underlying intimal hyperplasia.

It is unlikely that grafts and stents developed to overcome clinical pathological conditions caused by atherosclerosis, typically arterial blockage, will be widely applicable here. The cellular biology of the vessels involved in the interventional procedure to address atherosclerosis is different and involves a dysfunctional endothelium. Similarly restenosis, the renarrowing of an artery following a widening procedure, has a different underlying pathology and requires an alternative interventional approach.

#### 4.3.6 Risk factors

There are a number of product specific risk factors that may impact on Ark's ability to meet the business plan for Trinam® including:

- The Phase I study used a VEGF gene in a liposomal formulation. The Phase II study is being conducted using a different VEGF gene in an adenoviral vector as these have advantages. Preclinical studies have shown no adverse effects for Trinam<sup>®</sup>. Safety, ability to incorporate into the surgical procedure and clinical effectiveness in the prevention of neointimal hyperplasia in haemodialysis access grafts in man remain to be confirmed.
- The required process development on the manufacture of Trinam® may not be achieved resulting in Ark being unable to manufacture Trinam® economically; or the process development may take longer than expected leading to a delay in the proposed Phase III programme.
- Ark has allowed limited time between the completion of the Phase II study and the start of the
  Phase III. It may take longer than scheduled to gain the required approvals for the Phase III study
  and timeline slippage may occur.
- This novel application of an adenoviral gene therapy product may hamper patient recruitment so leading to timeline slippage.
- Whilst the clinical trial programme may show adequate improvement in graft patency to lead to
  product approval, the improvement in patency may not be sufficient to make the product cost
  effective leading to low product sales.
- If the trend in the US towards fistula usage and away from grafts continues, the market opportunity for Trinam® may diminish. However, if Trinam® is effective, it could have an impact on such a trend.
- Material of bovine origin is used in the manufacture of Trinam® and in the collar and glue. Ark
  complies with the FDA Guidelines for material from animal origin but these guidelines could change.

## 4.4 Kerraboot®

## 4.4.1 Product merits

The Kerraboot® is a medical dressing device for lower limb ulceration.

Approximately 12 per cent. of US adult diabetics have a history of foot ulcers, a risk factor for further ulceration or lower limb amputation. Diabetic foot ulceration currently places a significant financial burden on healthcare systems and reduces the quality of life for patients.

The Kerraboot® addresses the basic principles of wound healing by maintaining a warm, moist, protected environment to encourage re-granulation of affected tissue. Leg ulcers are difficult to heal partly because



within the wound, levels of active growth factors are reduced as a result of an imbalance between proteolytic enzymes and their inhibitors in the wound exudate. The Kerraboot® is designed to allow free drainage of exudate from the wound with capture in an integral super-absorbent layer at the base of the boot. The absorbent layer is covered by a one-way membrane. The outer layer of the Kerraboot® is composed of multi-laminate plastic to provide protection and reduce wound odour giving better social acceptability. It is a non-contact non-pressure dressing designed to minimise discomfort for the patient during dressing changes. The Kerraboot® is transparent allowing easy ulcer visualisation without the need for redressing. In addition, due to the ease of use, it has been shown to reduce the nursing time required to change dressings.

The Kerraboot® has been awarded a CE Mark in the EU and has been introduced into hospitals in the UK, representing an opportunity for Ark to generate revenue in the near term.

#### 4.4.2 Regulatory status

The Kerraboot® has been CE marked by Flexicare Medical Ltd ('Flexicare') as a Class IIb device, and it can therefore be marketed throughout the EU. This means that Flexicare is responsible for the CE marking and in the event that the arrangement with Flexicare was terminated, Ark would either have to get the Kerraboot® CE marked again by a Notified Body or use an alternative manufacturer who can CE Mark the device. CCL considers that this should be a routine process, achievable within a few months.

The Kerraboot® is a Class I device in the US and Ark has obtained a device listing for the Kerraboot® allowing it to be marketed as an occlusive wound dressing.

## 4.4.3 Supporting clinical programme

The nature of the Kerraboot's® design means that a formal clinical trial was not required prior to CE marking. However, prior to CE marking Ark assessed the use and application of the Kerraboot® in two studies in patients with leg ulcers of various aetiologies, severities and duration for periods of up to four weeks.

A preliminary study of a prototype boot was conducted in eight subjects. The odour associated with the ulcers in these patients was almost entirely eliminated. Nursing staff noted a significant reduction in time to clean and dress the ulcers: 5-8 minutes with the Kerraboot® compared to 15-45 minutes for standard dressings. The inability of the prototype boot to absorb all of the exudate led to skin maceration in two subjects.

A second study involving a total of 11 foot ulcers was conducted using a version of the Kerraboot® refined to include modifications identified from the findings in the first study. This study assessed the ease of use, dressing time, patient comfort and acceptability from both the patients' and healthcare workers' perspectives. The effects on wound healing were also examined. Kerraboot® was reported to be easy to use, comfortable, convenient and reduced the odour associated with the wound. The time taken to change the Kerraboot® in the majority of patients was between two and eight minutes. The majority of the ulcers showed signs of granulation of the ulcer bed. The ulcers of diabetic/neuropathic aetiology demonstrated the best healing on use of the Kerraboot® with the three pure diabetic/neuropathic ulcers in the study decreasing in size by between 30 and 60 per cent. In one patient for whom amputation was being considered, the wound showed signs of considerable healing and the likelihood of amputation was reduced. None of the ulcers were made worse by the application of this refined version of the Kerraboot®. CCL considers that these limited data are encouraging from a patient and healthcare worker usage perspective.

To support marketing activities, Ark has commenced a 30 patient study in the management of diabetic neuropathic foot ulcers in five centres in the UK. Centres have been selected based upon their influence among the community treating leg ulcers of this type. The primary objective of the study is to evaluate the use of the Kerraboot® compared to standard wound care in terms of patient and healthcare worker acceptability. Secondary objectives are to evaluate the healing rates with Kerraboot® and standard dressings as well as safety and quality of life. This study is expected to complete in H2 2004 and should provide data



adequate for descriptive analyses and subsequent publication to assist the dissemination of information and endorsement to a wider audience, mainly in the UK in late 2004/2005.

To date the Kerraboot® has not been formally evaluated in venous ulcers. Preliminary feedback from use in the field is encouraging. A pilot study to assess the Kerraboot® for the management of venous leg ulcers in patients who are not suitable for compression therapy is being planned.

In CCL's opinion conducting such studies is a reasonable strategy though the immediate impact may be limited. Treatment protocols can vary between countries and therefore it may be necessary to conduct further clinical studies to reflect local practice in other countries where it is intended to launch the Kerraboot®. CCL is not currently aware of plans for such studies.

## 4.4.4 Manufacturing

Flexicare manufactures the Kerraboot® for Ark. Flexicare is a manufacturer of medical devices, and holds ISO 9001 and EN46001 registrations, and has the authority to CE Mark Class IIa and IIb devices. Flexicare is an FDA registered establishment and so can manufacture for the US. Ark is finalising the manufacturing agreement with Flexicare and envisages that this will be non-exclusive.

The Kerraboot® is constructed from standard materials and the process of manufacturing the boot appears straightforward. The Kerraboot® is then placed in primary, secondary and tertiary packaging, and terminally sterilised.

CCL anticipates that the current manufacturing methods will be sufficient to meet Ark's projected demand for the Kerraboot® in the EU and the US in 2004 and 2005. Based on sales projections, the volumes required in 2005 mean that production must be increased. It appears to CCL that the manufacturing process should be capable of delivering adequate yields. Ark has an agreed transfer price with Flexicare that is currently independent of yield.

Flexicare, on the basis of the information publicly available and provided by Ark, appears to be an appropriate partner, in terms of technology and compliance, for Kerraboot® manufacture.

The Kerraboot® manufacturing process should be transferable.

#### 4.4.5 Commercialisation plans

Ark introduced the Kerraboot® to hospitals in the UK in late 2003.

To be prescribed and dispensed under the National Health Services (NHS) in the UK, Kerraboot® needs to be listed in the Drug Tariff; the price agreed will represent the maximum NHS reimbursement level for the device. Ark made an application for Drug Tariff Approval of the Kerraboot® in October 2003 and expects to obtain approval in H1 2004. CCL understands that the application incorporated feedback from preliminary discussions by Ark with the Prescription Pricing Authority. Until Drug Tariff Approval is obtained, sales of the Kerraboot® will be limited.

Both hospitals and community budget holders are potential purchasers of the Kerraboot®. Ark has a small contract sales force that is currently targeting specialist centres in hospitals but intends some increase in the sales force to also target primary care groups once Drug Tariff Approval is obtained. CCL considers that if the product is introduced in the hospital, its use could be continued in the community.

Until the proposed post launch patient study is completed and the results published, product sales may be slow since there are limited data on the use of Kerraboot® and its cost effectiveness.

For the US market, Ark's strategy is to secure a commercialisation partner either by a direct licence arrangement or a similar agreement. CCL feels that this approach is reasonable. To penetrate the market in the US, the Kerraboot® will need to be reimbursed. Products are coded for reimbursement according to standard pricing levels and we understand the Kerraboot® may be eligible for reimbursement under existing codes. No submission for reimbursement approval has yet been made.



Ark also intends to launch the Kerraboot® in Germany and in France. These plans are at an early stage. Reimbursement will need to be sought and obtained in each country.

#### 4.4.6 Market potential

Ark is positioning the Kerraboot® as a dressing device for the management of a range of leg and foot ulcer aetiologies but with the initial focus on diabetic ulcers.

In the US about 12 million people report that they suffer from diabetes, of which around 2 per cent. of these annually develop foot ulcers. The initial target population is patients with neuropathic or mixed neuropathic/ischaemic diabetic ulcers. This is over 75 per cent. of diabetic ulcers representing around 180,000 patients per annum in the US.

Ark anticipates that the Kerraboot® will, in time, be launched in the five main European markets, namely, UK, France, Germany, Italy and Spain. There are estimated to be over 10 million diabetics in total in these countries leading to a projected 150,000 patients per annum with diabetic neuropathic or mixed foot ulcers.

In addition, Ark is intending to market the Kerraboot® for venous ulcers. There is a point prevalence of around 0.1 per cent. to 0.3 per cent. of active leg ulceration in the population. Up to 80 per cent. of ulcerated legs have evidence of venous disease. In venous disease, the initial target segment for Kerraboot® is those venous ulcer patients who either cannot tolerate compression management or for whom compression management is not appropriate. This is estimated to be around 25 per cent. of venous ulcer patients leading to an estimated 110,000 patients in the US and 115,000 patients in the five main European countries.

The number of Kerraboots® used per patient will depend on the frequency of dressing change and the time taken to heal, or to move to an alternative dressing type. In diabetic ulcers highly exuding wounds require daily dressing changes and it generally takes over 12 weeks to heal. In venous ulcers, with heavily draining exudate, dressing changes can be required two to three times per week. Although over half of venous ulcers heal in ten weeks, large ulcers can take over six months to heal.

Chronic ulcer management is a cost sensitive area. In the UK, the proposed price for the Kerraboot® in Ark's Drug Tariff Application is at a premium to single existing dressings, however the product could replace more than one dressing at each change and there is a possible saving in healthcare worker time.

In the US, based on the proposed reimbursement code, the Kerraboot® will compare favourably to currently available reference products and also potentially reduce labour costs. As with other devices introduced in this way the clinical and economic benefits of the Kerraboot® will need to be confirmed and supported by appropriate marketing activity for the product to gain market share.

## 4.4.7 Competition

The main approaches to diabetic foot ulcer care are debridement, off-loading, infection control, dressings and advanced technologies such as skin replacement and recombinant growth factors. The standard approach to venous care is the use of compression bandages.

The Kerraboot® falls into the category of dressings and from a competitive standpoint should be considered against other dressings. Numerous dressings are available on the market with more appearing each year. The Kerraboot® is considered complementary to debridement, off-loading and infection control. Kerraboot® may also face competition from new technologies and devices, for example a novel product on the market for the management of chronic wounds is a vacuum-assisted closure device.

In the case of venous ulcers it is anticipated that the Kerraboot® could be used in cases where compression bandaging is unsuitable e.g. mixed aetiology ulcers or in cases where the patient can not tolerate compression bandages.



#### 4.4.8 Risk factors

There are a number of risk factors that may impact on Ark's ability to meet its business plan for the Kerraboot®:

- Successful evaluation studies and practical success in the field are necessary to drive sales. Although
  encouraging findings have been obtained, these are in a limited number of patients to date and the
  Kerraboot® has not been formally evaluated in venous ulcers. Further studies and use in the field
  may fail to confirm the value proposition and breadth of application.
- Drug Tariff Approval may not be given or it may take longer so delaying sales of the product. It may be given at a price lower than that requested by Ark.
- The plans for the US may take longer to put into place than anticipated; a commercialisation partner, manufacturing transfer and reimbursement are key areas that need to be addressed.
- A supply agreement with a single manufacturer brings the risk of interruption of supply of product, including for reasons that may be beyond Ark's or the manufacturer's control.
- Scale up may not happen fast enough to satisfy demand.
- Flexicare's CE Mark of the Kerraboot® and know how in the manufacturing process could delay transfer of the Kerraboot® to an alternative manufacturer if Flexicare was not party to the transfer. However, the process appears straight-forward and should be transferable with Ark's support.
- Under the terms of the proposed Flexicare agreement, Ark is required to give a forecast for Kerraboot® supply. If Ark is unable to forecast accurately, this may result in Ark having surplus stock if requirements are less than forecast, or if sales are greater than anticipated Ark may have insufficient stock to meet demand.
- Whilst we understand Ark has a development agreement with Flexicare, it has yet to sign an agreement for manufacture. Failure to achieve this may potentially disrupt supplies.
- In studies to date, no patient has used the Kerraboot® for more than four weeks so data on the effect or benefits of longer term usage are not available.

## 4.5 EG005

## 4.5.1 Product merits

Human immunodeficiency virus (HIV)-associated lipodystrophy syndrome is regarded as a set of distinct clinical abnormalities including fat loss, fat gain, dyslipidaemia and insulin resistance. This syndrome is associated with patients on highly active antiretroviral therapy (HAART), a combination of potent antiretroviral drugs, and can lead to interruption or discontinuation of therapy. Poor adherence with antiretroviral therapy has been shown to be associated with increased morbidity and mortality.

Scientific publications suggested that the mitochondrial toxicity of nucleoside reverse transcriptase inhibitors (one of the components of HAART) plays a role in the development of lipodystrophy. Ark is postulating that EG005 may address lipodystrophy through improving mitochondrial function.

## 4.5.2 Clinical status

EG005, an oral therapy, is in a Phase II clinical trial in the UK.

EG005 has the same active ingredient as Vitor<sup>TM</sup> which has been extensively investigated for its effect in hypertension and has been granted product licences in several countries (currently excluding the US). A full programme of preclinical and clinical safety and toxicology has been completed. No additional preclinical studies are currently planned.



A small genotyping study to assess whether the ACE genotype is associated with the development of lipodystrophy in HIV positive patients has been completed. A secondary objective of the study was to determine whether plasma levels of angiotensin II correlated with the presence of lipodystrophy. No genotypic differences were found. However, with regard to the secondary objective, plasma levels of angiotensin II in subjects with lipodystrophy were approximately twice those in subjects without lipodystrophy. The cellular level of angiotensin II, which probably would be more relevant, was not determined since it was not possible to use patients' body tissue.

A proof of concept randomised, double-blind, placebo-controlled, parallel-group, multi-centre Phase II study is ongoing in the UK and is targeted to recruit up to 50 patients. As of January 2004, 38 patients had been recruited. All patients who complete the study are eligible to enter a one-year open label extension study. CCL notes that the majority of patients completing the study have elected to enter the extension study.

Results from this study are expected to be available in H2 2004. This will provide data for a decision whether to proceed to a Phase III trial. A subsequent filing for fast track review in the US is planned.

In CCL's view this strategy is appropriate. The ongoing study is a 'proof of concept' study and should be the basis for a 'go/no go' decision on Phase III. If positive, it should also provide key data for the design of Phase III.

#### 4.5.3 Manufacturing

The active ingredient for EG005 is produced by the Japanese originator of the drug. EG005 for the trial has been manufactured under contract by an established international company based in the UK.

#### 4.5.4 Market potential

There are estimated to be between 850,000 and 950,000 people living with HIV in the US but about one quarter of these are unaware of their infection. It is estimated that around 400,000 patients in the US are prescribed HAART therapy. There are estimated to be between 520,000 and 680,000 people living with HIV/AIDS in Western Europe with an estimated 250,000 patients receiving HAART therapy.

Prevalence rates of lipodystrophy vary greatly from study to study. A cross study analysis has put the prevalence rate of the combined syndromes (fat accumulation and lipoatrophy) in the range of 1.8 per cent. to 83 per cent. Among the specific fat accumulation disorders prevalence rates have been reported for increased central adiposity around the abdomen ranging from 1 per cent. to 56 per cent. Reports suggest that this wide range of estimates of incidence is due to lack of uniform case definition and other variables that are poorly understood. On the basis of the current knowledge of the condition it is difficult to predict the market potential for EG005.

## 4.5.5 Competitive position

CCL is not aware of any approved therapy for this lipodystrophy associated with HIV. A range of approaches is under investigation including:

- Serostim® (recombinant human growth hormone, Serono International SA) has demonstrated positive
  results in reducing adipose tissue maldistribution in a Phase II/III trial; Serono is working with the
  FDA to finalise plans for the continued development of the product. Serostim® is currently approved
  for use in the cachexia of AIDS. However, the estimated treatment cost with Serostim® based on the
  dosage used in the Phase II/III study is more than \$150 daily.
- ThGRF (a stabilised analogue of growth hormone releasing factor) from Theratechnologies Inc. is in a Phase II trial in Canada and the US with results due to be announced Q1 2004.
- Leptin replacement is in a trial supported by the NIDDK.



- Metformin may have some benefit; in clinical trials it has given some improvement in body fat distribution and lowered insulin resistance in HIV-infected patients with lipodystrophy.
- Lipid lowering drugs are considered for dyslipidemia in HIV-infected patients rather than for lipodystrophy.

A current approach to slowing the progression of lipodystrophy is to switch the combination of antiretroviral drugs that the patient receives. As the effect of different drugs and different drug combinations becomes more clearly understood and new antiretroviral drugs are launched, this may impact on the incidence of lipodystrophy and the need for a specific treatment.

#### 4.5.6 Risk factors

There are a number of risk factors, which may impact on Ark's ability to meet its business plan for EG005 including:

- The rationale for the use of EG005 to treat lipodystrophy in HIV patients has not been validated in *in vivo* models. CCL has been informed that there are no appropriate models. There is a risk that the clinical trial will not show any effect. The observed differences in angiotensin II plasma levels in patients with and without lipodystrophy is encouraging but not necessarily indicative of clinical effect.
- As lipodystrophy syndrome becomes better understood and more clearly associated with specific
  drugs or classes of drugs, the prevalence may be reduced by switching of antiretroviral drugs thereby
  reducing the market need for EG005.
- Emergence of new antiretroviral drugs that reduce the incidence of lipodystrophy may reduce the market opportunity for EG005.

## 4.6 Ox-LDL

Oxidation of low density lipoprotein is thought to play a key role in the initiation of atherogenesis. Ox-LDL is antigenic and measurement of the level of antibodies to Ox-LDL may therefore provide an assay for assessment of atherosclerosis, risk of atherosclerotic disease or response to interventions.

Ark is developing an assay for the measurement of antibodies to Ox-LDL. Two studies have been undertaken that have given encouraging findings regarding the potential use of antibodies against Ox-LDL as diagnostic of coronary risk in both acute and prophylactic settings. Ark believes it has sufficient clinical data to pursue a CE Mark and a programme is planned to complete the necessary work and technical dossier for CE marking in 2004 in Europe. Ark's plans for the US are in development.

CCL considers that significant additional research will be required to demonstrate the clinical utility of this assay as a routine diagnostic in acute coronary assessment or as a longer-term measure of cardiac risk. Adoption of the test as a routine diagnostic will require clear demonstration of the clinical value of the test in research studies and clinical practice. Widespread adoption may only follow the inclusion of the test in clinical guidelines: this can take several years.

## 5 RESEARCH PROGRAMMES

#### 5.1 Scavidin®

Scavidin® is a drug-targeting technology that is currently in preclinical development. It is a gene construct that can result in the expression of a fusion protein receptor on the surface of cells which can bind a compound called biotin with high affinity and internalise it into the cell. Because the Scavidin<sup>TM</sup>-expressing cells should be able to bind tightly to and internalise biotin-tagged drugs, these cells should receive a greater dose of the drug compared to non-targeted cells.



Initial studies using biotin complexes demonstrated binding and internalisation of the biotin complex to the Scavidin® expressing cells *in vitro* and *in vivo*. Provided proof of concept in man is demonstrated, CCL considers that this is an attractive technology platform although careful positioning will be required to ensure that it is directed to applications where it gives a strong benefit over other approaches.

## 5.2 BacV<sup>TM</sup>

Bac $V^T$  vectors are based on baculoviruses, which are a varied family of viruses that naturally can only productively infect and replicate in certain insect cells. This confers a degree of safety in their use, and different baculoviruses have been used as biopesticides for many years. However, baculoviruses, when kept isolated from blood complement, are able to penetrate mammalian cells, deliver viral DNA to the nucleus and express mammalian genes that are engineered into the viral genome. In this way, baculoviruses can be used as gene-delivery vehicles in mammalian cells, and thus may potentially be used as gene therapy vectors. Ark has demonstrated transient gene transfer using Bac $V^{TM}$  in *in vivo* models. In addition, due to its large capacity to accept foreign DNA fragments and ability to result in high expression levels, baculovirus has potential as a functional genomics platform where it could be used as a tool in identification of gene function or small molecule targets. CCL considers that Bac $V^{TM}$  is a versatile programme with possible application in the longer term as a gene therapy vector.

## 5.3 Vascular biology and growth factors

Ark is supporting research into the role of VEGF and related genes and is pursuing biology and chemistry programmes to develop approaches for several clinical applications. Programmes include:

- Neuropilin-1 (NP-1) receptor antagonist. NP-1 is a receptor for VEGF that is expressed in carcinoma cells. It has been reported that VEGF promotes the survival of tumour cells expressing NP-1. In in vitro studies using cell lines, Ark has shown that binding to NP-1 receptors can be inhibited by its peptide candidate. This peptide has been shown to inhibit angiogenesis in an in vivo model of an occular disorder. CCL notes that NP-1 receptor antagonists appear to be a novel approach with potential application in cancer, occular disorders or nerve degeneration.
- VEGF peptide antagonist. This has given encouraging results in an in vivo model of an occular disorder.

Ark's vascular biology and growth factor programme has previously given rise to Trinam® and Kerraboot® and in CCL's opinion it is likely that the research programmes will generate further novel product candidates.

## 6 RISK FACTORS

CCL considers that Ark will face certain risks in the realisation of its business plan. In particular, the industry areas covered by Ark are fast moving and changes in circumstances, such as the regulatory, commercial, clinical or technical environment, may render some or all of the information incomplete, obsolete or invalid in the future. This section should be read in conjunction with the product specific risks discussed in section 4 for each of the Group's lead products.

#### Clinical Risks

• The development of pharmaceuticals bears a high degree of risk. Failure can occur in any of the many aspects of safety testing which are required, or due to lack of clinical efficacy or due to an adverse event with a low incidence rate which may only become apparent after evaluation of a large number of patients. It is probable that not all of the product candidates in Ark's portfolio will successfully complete development and be launched. These risks are common to all companies developing therapeutics and in CCL's view the Group has a broad portfolio and is not dependent on any single technology or product.



- Ark's clinical programmes may encounter delays. For example, this could be due to delays in gaining
  regulatory approval for proposed trials, in gaining approval from gene therapy advisory committees, in
  gaining approval from local ethics committees to enable centre participation in studies, in patient
  recruitment, through the use of third parties, due to trial design or due to delays in the manufacture of
  product for use in the proposed trials.
- Further preclinical or clinical studies may be required in addition to those currently planned by Ark. Ark may incur additional development cost and expenses over and above those currently expected.

## Regulatory Risks

- Regulatory approval may be delayed, limited or denied for a number of reasons. Regulatory authorities
  in different parts of the world have specific and sometimes differing requirements for the approval of
  therapeutics irrespective of whether it has been approved elsewhere. This may result in the demand for
  additional data so causing delays or result in approval for different indications of use.
- When a product has been approved, it is subject to post market surveillance and its licence may be withdrawn, restricted or changed.
- Gene-based medicine is a developing area and no human gene therapy product has been approved for
  market by the US or EU regulatory authorities. Therefore while certain guidance on development exists
  this is in an evolutionary situation and requirements are being refined. This provides for a less certain
  understanding of the regulatory requirements than for conventional pharmaceuticals or biological
  medicines. CCL recognises that Ark is taking a proactive approach to address these uncertainties.
- Two of Ark's lead products, namely Cerepro<sup>™</sup> and Trinam®, are based on adenoviral vectors. It is reported that over 200 gene therapy trials by others using adenoviral vectors in a range of indications have been completed, are ongoing or pending. In 1999 a patient who received an adenoviral gene therapy product in a clinical trial in the US died. Serious deficiencies were subsequently identified in the conduct of the trial. If there were to be a further death, or serious adverse event, attributable to an adenoviral gene therapeutic this could lead to a moratorium on trials and this would result in a serious delay or termination of two programmes in Ark's portfolio. However, there has now been a stringent review and tightening up of the requirements and guidelines surrounding gene-based therapeutics.

#### Manufacturing Risks

- A manufacturing licence for production for Phase III trials in the EU needs to be granted to both GMP1 and GMP2 suites in the Kuopio facility. If there is delay in obtaining this licence or this licence is not awarded this will delay Ark's gene-based programmes. CCL understands that Ark is working with FNAM and we consider that this is a wise approach. Once the facility is licensed, it will be subject to further inspections by FNAM and if Ark fails to maintain compliance with the required standards, the licence could be suspended.
- Ark is currently directing efforts towards ensuring that the Kuopio facility meets both European and FDA requirements. There is a risk that it may not meet these requirements.
- To enable production for commercial supply, the manufacturing facility will also be subject to a preapproval inspection by the relevant regulatory authorities. There is a risk that shortcomings might be
  identified and there may be a delay in approval or the facility may not be approved for commercial
  supply.
- Process development using bioreactors is planned for Ark's gene-based products. Moving to bioreactors
  may have an adverse effect on the ability to meet product specifications and will be regarded as a
  change to the manufacturing process requiring the demonstration of bioequivalence. If process
  development work and/or comparability studies are not successful or if the work takes longer to
  complete than planned this could delay or prevent supply of product.



- An adenoviral reference material developed under the guidance of the FDA has recently been released, to enable the production of more consistent, safer, quality adenoviral vectors and to allow comparability between preclinical studies and clinical studies. Ark's plans are based on manufacture to meet these FDA requirements for adenoviral gene-based therapeutics. Ark faces the risk that all companies developing adenoviral gene therapy products face, namely that the FDA may further tighten the standards. This adds risk of new, unexpected requirements with adverse potential impact on budget and timelines. At present CCL is not aware of pending changes to the requirements and notes that the reference material has only recently been issued. Ark and its regulatory consultants regularly monitor activities of CBER and the guidance it issues for relevance to its own operations.
- Ark uses a number of CMOs and suppliers. If these were to cease to provide their services at short notice, this could result in a delay in programmes.
- Two of Ark's lead products, Cerepro<sup>™</sup> and Trinam<sup>®</sup> are biologics to be manufactured at a single site in Kuopio. This is typical of the industry as approval for manufacture of biologics is given for a specific facility. However, this brings the risk of interruption of supply of product, including for reasons that may be beyond Ark's control.

#### Commercial Risks

- Once approval is gained for a product there is no certainty that Ark will achieve commercial success
  as several factors determine this including approved indication, clinical benefit, market size, pricing
  levels, reimbursement and competitive environment.
- There is no guarantee that, after regulatory approval, reimbursement authorities will elect to cover the
  cost of the product or delay may be encountered in gaining this reimbursement thus limiting market
  adoption.
- New, more effective therapeutics or treatments may emerge which obviate the need for Ark's products.
- · Alternative treatments may emerge which are more attractive than Ark's products.
- In general, Ark intends to progress products through to commercialisation itself without forming collaborations with companies. Ark will therefore be responsible for all the development costs and these may be subject to change.
- Ark is an emerging Group that does not have an established sales and marketing resource, and may
  not be able to commercialise this product or gain the expected sales.

#### 7 SUMMARY

Ark is an emerging healthcare Group combining a strong commercial focus with development expertise to address areas of high unmet clinical need. The Group is well advanced in clinical development with a broad portfolio of lead products.

Cerepro<sup>™</sup> has completed two safety and efficacy studies that gave encouraging results with an apparently large treatment effect. Ark is planning a further clinical study which could lead to a regulatory filing in the EU in 2007 although CCL notes that an earlier European filing may be possible with the existing clinical data in this area of unmet medical need.

Ark recently introduced the Kerraboot® into UK hospitals, which provides an opportunity for the Group to generate revenue in the near term. CCL considers, based on limited data, that the Kerraboot® appears to have benefits from patient and healthcare worker perspectives.

In addition, Ark has three further products in clinical development namely: Vitor™ in a Phase III study, Trinam® with IND approval for a Phase II study in the US and EG005 in a Phase II proof of concept study in the UK. The Group's approach, where possible, is to take advantage of Fast Track and Orphan Drug



Status; these have the potential to expedite the development programmes. Ark has already obtained Orphan Drug Status for two product candidates and Fast Track Designation for a third.

Ark is focussing on cancer and vascular disease. It is developing a pipeline of earlier stage projects in research and development through collaborations with leading scientists in the UK and Finland.

Broadly the Group's strategy is to retain value, by controlling clinical development, manufacture, registration and marketing of its lead products. Ark is not dependent on partnerships with large pharmaceutical companies for its success. CCL considers this to be a sound approach for specialist medicines for niche markets

In CCL's view the Group's products have the potential to develop a competitive edge if they are shown to be safe and to have a clear clinical benefit. However, the development of new pharmaceuticals carries a high degree of risk. Safety and clinical efficacy remain to be proven for Ark's portfolio of therapeutic products. Commercial success is not guaranteed even after product approval. Many of these risks are common to companies developing therapeutics, however, there are additional uncertainties associated with gene-based products including the safety, regulatory and manufacturing requirements. Ark's risks are balanced across the portfolio of projects, which include small molecule therapeutics, gene-based products and medical devices and the Group is not dependent on any single technology or product.

In CCL's opinion, Ark's management team has the appropriate experience and capabilities to implement the Group's plans.

Yours faithfully

For and on behalf

Cambridge Consultants Ltd

#### PART VI — PATENT ATTORNEYS' REPORT

## Gill Jennings & Every

# European Patent Attorneys European Trade Marks Attorneys

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Dear Sirs 3 March 2004

## Ark Therapeutics Group plc Patent Attorneys' Report

Gill Jennings & Every ("GJE") is a partnership of 14 European Patent Attorneys, Chartered Patent Agents and Trade Mark Agents supported by another three qualified agents and a total of about 80 employees. The firm, which was founded in 1912, is based in London, with branch offices in Cambridge, Munich and Alicante. The firm advises on all aspects of intellectual property ("IP"), including patent, design and trade mark rights, and copyright, and has a wide variety of clients, both in the United Kingdom and overseas, operating in all technical fields. GJE has acted for several clients in connection with flotations on the London Stock Exchange.

GJE has acted as intellectual property advisers to Ark Therapeutics Group plc's wholly owned subsidiary, Ark Therapeutics Limited ("Ark"; formerly Eurogene Limited) since its foundation. Since 1999, and on instructions from Ark, GJE has also acted for Ark Therapeutics Group plc's Finnish subsidiary now known as Ark Therapeutics Oy (formerly Quattrogene Oy, previously Medigene Oy). In respect of patent matters, GJE has, throughout that time, been represented by Mr Robert Perry, who has been a Chartered Patent Agent and European Patent Attorney since 1978 and a partner of GJE since 1980. Mr Perry has considerable experience in patents relating to pharmaceuticals and biotechnology. In respect of trade mark matters, GJE has, throughout that time, been represented by Mr Alan Blum, who has been a Chartered Patent Agent and European Patent Attorney since 1977 and a partner of GJE since 1989. Mr Perry and Mr Blum have prepared this report.

GJE hold the files containing all the material information about the IP portfolios of Ark and Ark Therapeutics Oy, in the name of Ark or Ark Therapeutics Oy (or Eurogene Limited, where the relevant change of name has not been recorded). Annuity payments to keep the IP in force are handled by the specialist firm of Computer Patent Annuities Limited Partnership in Jersey, Channel Islands, of which firm the partners of GJE are also partners.

GJE has been asked to report on Ark's patent and trade mark strategy and its IP portfolio. This report has the following sections:

- 1. The Patent System.
- 2. Ark's patent and trade mark strategy.
- 3. The present portfolio of patent and trade mark rights of Ark and Ark Therapeutics Oy.
- 4. Third party conflicts and other rights.

#### 1. THE PATENT SYSTEM

- 1.1 A patent is a national right, enforceable by its proprietor, to prevent others commercially practising an invention. The intention underlying the grant of patents is to reward and encourage innovation. The invention to which any patent relates must be clearly and completely disclosed in the patent specification and meet the requirements for patentability established by legislation in the country in which the patent is granted.
- 1.2 The precise criteria of patentability differ in detail from country to country but enjoy a large measure of harmonisation. In particular, the following four major criteria are common to all countries:
- 1.2.1 **Novelty** The patented invention must not have been disclosed, by the inventor or by anyone else, prior to the filing of the application for the patent. In the United States, the novelty of an invention may be judged as of the date of invention, rather than the date of filing a patent application.
- 1.2.2 **Inventive Step** The invention must involve an "inventive step" or, in other words, be "non-obvious". Essentially, to be patentable, an invention must not be within the grasp of someone of ordinary skill in the relevant art, at the date the patent application is filed. In the United States, the relevant date may be the date of invention.
- 1.2.3 Industrial Applicability/Utility The invention must be useful but not be excluded from patentability by the relevant legislation. The most relevant exclusion for Ark and Ark Therapeutics Oy in the United Kingdom and the other signatory states of the European Patent Convention ("EPC") defines methods of treatment of the human or animal body by surgery or therapy, but not substances used in such methods, as being inherently incapable of industrial application. In practice, as discussed later, this is unlikely to pose any problem for Ark or Ark Therapeutics Oy.
- 1.2.4 Patentable Subject Matter There are various categories of invention which are defined as not being patentable as a matter of statute law. In the United Kingdom and other countries where the EPC applies, these include plant and animal varieties and essentially biological processes for the production of plants and animals. Certain potential inventions, such as computer programs and mathematical and business methods, are currently also not considered to be inventions for the purposes of patent law in United Kingdom and other European countries, unless they have a "technical effect".
- 1.3 Even if an invention fulfils the above criteria, the patent specification must contain a sufficiently clear and complete disclosure of the claimed invention to enable people skilled in the art to put it into effect; and the claims, which are the legal definition of the monopoly sought to be protected, must be clear, concise and supported by the specification.
- 1.4 Although, as has been stated above, patents are national rights, there is a large measure of international co-operation, which means that it is not necessary for a prospective patent applicant to file applications at the outset in all of the countries in which patent protection is desired. Firstly, the Convention of Paris for the Protection of Industrialised Property (Stockholm text) ("the Paris Convention") provides essentially that, where a patent application has been filed in one of the contracting states to the Paris Convention (which include most industrialised countries of the world), further applications for the same invention may be filed up to one year later in other contracting states and, providing that certain formalities are complied with, those later applications are treated for most purposes as if they were filed on the date of the first application. This system of establishing a so-called priority date, and filing world wide within one year of that priority date (i.e. the date of the first filing), is of great importance to users of the patent system generally. One of the main attractions is that it enables the filing of a single application, which for an applicant based in the United Kingdom will usually be made in the United Kingdom, so that the applicant can consider, over the course of the next 12 months, in which countries to pursue patent protection.
- 1.5 Usually, a patent is granted in a given country further to a patent application filed in that country, and is effective in that country. An important exception is where an application is filed at the European Patent Office

("EPO"), which designates one or more countries party to the EPC. A European patent application is processed centrally and, if ultimately successful, matures into a granted European patent. The term "European patent" is in some ways a misnomer, as it actually constitutes a bundle of national patents, each of which can be enforced separately through the relevant national Courts against infringers, and the validity of which can likewise be challenged separately in those national Courts.

- 1.6 Although there are different routes to patent protection, in order to seek protection on an international scale in the most efficient manner, Ark and Ark Therapeutics Oy have filed patent applications under the Patent Co-operation Treaty ("PCT"). Such an application will usually be filed 12 months after the national application from which it claims priority (in Ark's case, usually a United Kingdom application filed in English, designating the countries in which patent protection is sought). Many countries, and all those generally considered to be commercially important, are party to the PCT, including the United States, Japan, and also the EPO (which relates to countries listed in paragraph 1.8, below). Once filed, a PCT application is searched by a designated International Searching Authority which, in Ark's and Ark Therapeutics Oy's cases will be the EPO. On request, an EPO Examiner conducts an international preliminary examination, which effectively acts as a dress rehearsal for patent examination in the various designated countries. It is important to note that a successful international preliminary examination does not guarantee that a patent will be granted, but it can provide a useful pointer to the types of issues that will have to be addressed subsequently. It may also identify potentially conflicting third party rights. The international application itself cannot mature into anything approaching an "international patent", but rather it fragments into a series of national patent applications (or regional patent applications, such as a European patent application), which themselves enter the relevant national and regional examination processes towards grant. This ex-PCT process begins at the end of a period of 30 months from the priority date of the relevant international application. The PCT system therefore delays expense and allows savings where applications are abandoned within the first two and a half years, before they have entered the national or regional application phase.
- 1.7 After the international phase of a PCT application is over, a "family" of related patent applications for the same invention arises for examination before the patent authorities of the chosen countries or regions. Examination comprises a dialogue between the patent examiner and the applicant's patent attorney in each of those jurisdictions. Each objection to the grant of a patent raised by the examiner has to be addressed, either by argument or by appropriate amendment, or both, before a patent can be granted. The fact that a patent application is pending is no guarantee that a patent will be granted or that its scope will be broad enough to provide the protection sought or exclude competitors with similar technology.
- 1.8 At the date of this document, 27 states have ratified the EPC. A European patent application made now can designate, and lead to patent rights, in each. Of these states, Turkey's ratification became effective in November 2000, and Bulgaria, the Czech Republic, Estonia, Hungary, Romania, the Slovak Republic and Slovenia have ratified more recently. Patent applications of Ark and Ark Therapeutics Oy in respect of their most important technologies, which we understand to be Trinam<sup>®</sup>, Vitor<sup>™</sup>, Kerraboot<sup>®</sup>, Cerepro<sup>™</sup> and Project EG005, were made before November 2000. Therefore, the European patent applications in respect of these technologies designate all of the following states:

Austria Finland Belgium Italy

Cyprus Luxembourg
Denmark Monaco
France Netherlands
Germany Portugal
Greece Sweden

Spain Switzerland/Liechtenstein

Ireland United Kingdom

A European patent application can also be "extended" to certain other jurisdictions which are not full signatories to the EPC, so that patent protection for the relevant invention can be obtained there as well, based on the original filing at the EPO. These "extension states" are currently Albania, Latvia, Lithuania, Macedonia and Romania. Slovenia was also an extension state at the date of filing the European applications on Ark's most important technologies, but was not included in those applications, being, we understand, of low commercial importance.

- 1.9 Another supra-national organisation analogous to the EPO is the African Regional Intellectual Property Organisation ("ARIPO"). The present contracting states are Botswana, Gambia, Ghana, Kenya, Lesotho, Malawi, Mozambique, Sierra Leone, Somalia, Sudan, Swaziland, Uganda, Tanzania, Zambia and Zimbabwe.
- 1.10 The patent examination process typically takes from two to five years from filing, depending on the jurisdiction and the nature of the issues raised. However, it is possible to defer the beginning of the examination process in some countries under certain circumstances; for example, Japanese law allows the filing of a request for examination to be deferred for up to three years (this period was seven years until recently, and that applies to many of Ark's and Ark Therapeutics Oy's Japanese applications). For cost reasons, and in order to take advantage of the experience of examination at the EPO and US Patent Office, Ark has always chosen to defer examination by seven years, where possible. Therefore, it may be up to ten years from filing before a Japanese patent is obtained.
- 1.11 Once a patent has been granted, it is not immune from challenge. The validity of patents can be called into question either in specific proceedings for that purpose or as part of an infringement action undertaken against a third party, depending on the jurisdiction. During the nine months following the grant of a European patent (please see paragraph 1.5), there is the opportunity for third parties to "oppose" grant centrally, at the EPO. Thereafter, any challenge to a European patent has to be brought in the Patent Offices or Courts of the countries in which national patent rights have been obtained. Any such challenge in one of those countries will not necessarily affect the national patents within the same family in any other country.
- 1.12 Generally speaking, patents can last for up to 20 years, calculated from the application date in each country, providing that any renewal fees necessary to maintain the patent in force are paid in due time (annually in most countries). The right to enforce a patent against a third party exists as from the date of grant. In certain jurisdictions back damages can be claimed from the date of an application's publication if there has been infringement of a valid claim in the application.
- 1.13 Some countries provide an effective extension of patent terms in certain circumstances. One of the commonest is where the launch of a pharmaceutical product has been delayed in satisfying the requirements of regulatory authorities responsible for the safety of such products and for granting permission for them to be marketed. Such protection is available for new chemical compounds, and not for new uses of known compounds. Accordingly, such protection will not be available for Trinam<sup>®</sup>, Vitor<sup>™</sup>, Kerraboot<sup>®</sup>, Cerepro<sup>™</sup> or Ark's Project EG005.

## 2. ARK'S IP STRATEGY

### 2.1 Background

In our view, the Directors of Ark have clearly understood the importance of protecting its technologies, including those acquired from third parties, which represent its most important assets. Regular meetings are held, attended by Dr Alan Boyd, Ark's Director of Development, and Mr Perry of GJE, to discuss new developments, patent filing and prosecution programmes and commercial implications. Previous meetings have given us a platform to educate Ark personnel in important aspects of IPR-related practice. Thus we have emphasised the importance of maintaining inventions secret within Ark, at least prior to the filing of corresponding patent applications. We have recommended and received assurances that the employment contract of any employee involved in research and development makes clear the employee's obligations in this respect and confirms the statutory position that such inventions made in the course of the employee's duties automatically belong to their employer. We have also explained that all research work carried out for Ark should be recorded in fixed-leaf notebooks and the notebooks should be countersigned at regular intervals by a collaborating worker. This is particularly important in support of US applications where the date of invention may be a determining factor. Generally, in other countries, the date of first filing is the significant factor.

Ark's policy has been to protect its position by seeking patents, at least with regard to its core technology, and in all those countries of commercial importance to it. Although, from time to time any director or manager of Ark may consult us directly, particularly in matters of urgency, outside of the regular meetings, we report directly to, and take instructions on matters of importance or involving significant expense from, Dr Boyd or Dr Nigel Parker, Ark's Chief Executive Officer.

## 2.2 Patent Filing Procedure used by Ark

#### 2.2.1 Initial Filing

When instructed by Ark to seek patent protection for inventions owned by Ark or Ark Therapeutics Oy, Ark has generally established priority by filing a basic patent application at the United Kingdom Patent Office. Then, within 12 months, for those cases where it is decided to pursue patent protection and not to keep the inventions secret, the provisions of the PCT are utilised by the filing of international patent applications. As indicated above, the PCT system allows a single application to be filed designating any of the PCT's signatory states, currently over 100 in number, which include the commercially important countries in the world. Ark's international applications are searched by the EPO in its capacity as a designated PCT International Searching Authority to identify relevant prior art. The international applications are then published 18 months after the earliest priority date, following which, in all existing cases of sufficient age, Ark has requested that international preliminary examination is conducted by the EPO.

In taking advantage of the PCT system, Ark has, on each occasion, initially designated all possible states. Subsequently, the number of states has been cut down to a greater or lesser extent, depending upon Ark's perception of the importance of the invention, but in all cases the EPO has been used for pursuing protection in contracting countries of the EPC.

#### 2.3 Protection of Therapeutic Methods

In several instances, Ark is involved in the development of known drugs for which new therapeutic indications have been identified. By definition, these drugs cannot be protected as new chemical entities. In some cases, new formulations may be found, in which case patent protection for such a product can be sought. However, in many cases, patent protection will be defined by the new use.

Patent claims to such methods of therapy have long been allowable in the US. As indicated in paragraph 1.2.3, in the United Kingdom and under the EPC, such claims are barred by statute. However, a form of claim to the manufacture of a medicament for a specified therapeutic indication is allowable at the EPO and in all EPC-contracting countries. This is effectively a claim to a therapeutic method. The validity of such claims has been upheld by the United Kingdom Court of Appeal.

In Japan, patent claims to methods of therapy as such are also unallowable, but accepted practice is that an alternative form of wording, specifying the compound and defining the new use, which should give adequate protection, is allowable.

Additionally, generic drug companies must obtain regulatory licences similar to those obtained by a company, such as Ark, which specify the relevant drug and therapeutic indication. Therefore, even a narrow patent claim which associates the drug and the indication is a deterrent to generic competition.

## 2.4 Searching

Where Ark has considered it appropriate, further to our advice, we have commissioned novelty and infringement clearance searches, and searches into the patent portfolios of known and known potential competitors and of known potential collaborators. Ark maintains a regular watch of patent publications emanating from known competitors and known potential competitors.

In general, for novelty searches, we rely on those conducted by the European and US Patent Offices in particular, complemented by the relevant inventors' knowledge of the art. For infringement searches, certain information is provided by novelty searches and the regular watch. We also conduct complementary searches if a project has reached a point where commercial development has a defined product specification, as otherwise such searches are rarely likely to produce meaningful results before then. No search can be comprehensive, and the results depend on the chosen search criteria and the classifications that are used to index patent documents. Therefore, although we conduct searches, and select our search criteria and classifications, with due diligence, the results of those searches, as reported here, are not necessarily conclusive.

In particular, we have commissioned a specialist search agency to conduct infringement searches for potentially relevant third party rights in respect of Trinam® and Kerraboot®. These did not reveal any third party rights which we considered likely to be infringed by those technologies. In respect of project EG005, Vitor™ and Cerepro™, we believe that the information we obtained by the other routes described above, and by searching for patents in respect of the active agents, provided sufficient information regarding the

likelihood of those technologies infringing third party rights. In conducting these searches, no third party rights which appeared likely to be infringed by those technologies were revealed.

#### 2.5 Trade Mark Filings

In addition, Ark has appreciated that registered trade marks have value. Accordingly, certain trade mark applications have been made, and trade marks registered, which are briefly summarised in Section 3B below.

#### 3A. THE PATENT PORTFOLIO

In addition to the cases summarised below, certain patent applications have been filed within the last 18 months, and have not yet been published, and further patent applications are under consideration. To protect Ark's and Ark Therapeutics Oy's interests, for example in case it is decided to keep the technology secret or to abandon an existing application and refile it, details of these have been excluded from this report.

#### 3.1 Summary of Patent Cases

For the purposes of this report, inventions and the corresponding patents and patent applications are identified in order, those that we understand from Ark to be most important first, by family. Any one family may include patent applications which claim more than one invention, which means that individual patent applications may need to be divided (without loss of priority), in order to protect the inventions. Thus, one application may eventually lead to two or more patents in the same family.

According to our current knowledge and belief, the patents and patent applications listed below do or will, when granted, give enforceable protection for the key technologies of Ark and Ark Therapeutics Oy in the countries in which they have been filed or which they designate.

## 3.1.1 Thymidine Kinase Gene Therapy (Cerepro<sup>TM</sup>)

Country	App. No.	Patent No.	Status
EPO	99971860.4		Pending
Australia	13851/00	749451	Granted
Canada	2348624		Pending
China	99812930.5		Pending
Hungary	P0104046		Pending
Japan	581225/00		Pending
South Korea	2001-700945		Pending
Mexico	PAa/2001/004410		Pending
Norway	20012220		Pending
Poland	P349489		Pending
US	09/830725	6579855	Granted

Recorded Owner: Ark Therapeutics Limited

Inventors: Seppo Ylä-Herttuala, Anu-Maaria Sandmair, Sami Loimas, Matti Vapalahti

This invention is based on the discovery that adenovirus can be used as a vector to deliver thymidine kinase, not to a tumour as such but to healthy brain tissue remaining after surgery to remove a tumour.

The first filing on this invention was made in the United Kingdom in November 1998, by Prof. Ylä-Herttuala. A corresponding PCT application was made by Medigene Oy (the previous name of Ark Therapeutics Oy) in November 1999. Ark has subsequently been recorded as the Applicant. Subsequent filings have been made in various countries, as shown above.

The PCT Application has been searched and examined by the EPO. In the International Preliminary Examination Report ("IPER"), one significant objection was raised, i.e. that the invention, as claimed, lacks novelty with respect to the use of earlier publications concerning injecting similar vectors into solid tumours. We believe that the invention is novel and patentable, based on the following factors:

- (a) Injections are given to healthy brain cells following the surgical excision of a tumour.
- (b) The discovery that treatment results from delivering the gene therapy to healthy cells, which, by the so-called bystander effect, kills any adjacent cancer cells and hence inhibits the recurrence of the tumour.
- (c) All previous comparable treatments have been given directly to cancerous cells or the tumour mass.

The first Office Action (an official report produced as part of the examination process) from the US Patent Office raised essentially the same objection as raised in the IPER. In response, submission of the given argument was persuasive. The EPO has recently issued its first Examination Report, raising the same objection. An appropriate response has been filed, and we are confident that the objection will likewise be overcome.

We estimate that a European patent will be granted in 2005. The US patent and, when granted, patents in Europe, the US and Japan, at least, may be maintained until 2019, subject to the payment of renewal fees.

#### 3.1.2(a) Use of ACE Inhibitors (Vitor™)

Country	App. No.	Patent No.	Status
EPO	98947698.1		Allowed
Australia	94533/98	742506	Granted
ARIPO	AP/P/00/01796		Pending
Canada	2306216		Pending
China	98811314.7	125248	Granted
Hungary	P0003982		Pending
Japan	516658/00		Pending
South Korea	2000-7004109		Pending
Mexico	003707		Pending
Norway	20001979		Pending
Poland	P340838		Pending
Singapore	200002043-8		Pending
US	09/529628		Pending

Recorded Owner: Ark Therapeutics Limited (or its former name of Eurogene Limited).

Inventors: Hugh Montgomery, John Martin, Jorge Erusalimsky

This family was initially based on a discovery that the renin-angiotensin system is associated with the ability of individuals to exercise effectively, how effectively being dependent on their genotype. That discovery was then substantiated by experiments demonstrating that a reduction of cellular angiotensin levels by the inhibition of angiotensin-converting enzyme ("ACE"), increases the mitochondrial membrane potential of cardiomyocytes (i.e. heart muscle cells) and accordingly their capacity to generate energy. These data indicate that ACE inhibitors are useful for the treatment for hypoxia or impaired metabolic function, especially in the treatment of stroke and also of muscle wasting or "cachexia", which may be associated with AIDS, ageing, cancer or other conditions.

This family was first filed in the UK in October 1997, by BUPA Hospitals Limited. Following assignment to Eurogene Limited, in October 1998, a corresponding application was made via the PCT in October 1998. Subsequently, ex-PCT filings have been made in several countries, as shown above. Owing to this invention's perceived potential utility in the treatment of AIDS at the time of making the ex-PCT filing, these include Singapore and certain African countries.

The PCT patent application had claims to therapeutic uses of inhibitors of the renin-angiotensin system. When searched by the EPO, many allegedly relevant prior art documents were cited. We advised Ark that protection could, however, be obtained for the key cachexia indications, since the cited prior art does not suggest non-heart-related uses of ACE inhibitors. The EPO Search Report also indicated that the PCT application claimed more than one invention.

Accordingly, as and where necessary, Ark will pursue claims relating to the treatment of cachexia, with particular reference to cancer. We understand that the possibility of filing divisional applications, relating to other uses originally claimed, will not be pursued.

Limitation to cachexia treatment has led to allowance of this family by the Australian and European Patent Offices. Similar amendments and arguments have been filed in response to an Office Action from the US Patent Office and we believe that a patent in essentially the same form will be granted there too.

We estimate that European and US patents on use in cachexia will be granted in 2004. Before grant, Ark is not prohibited from proceeding towards commercialisation. When granted, the patents in Europe, the US and Japan, at least, can be maintained until 2018, subject to the payment of renewal fees.

#### 3.1.2(b) Use of ACE Inhibitors in the treatment of lipodystrophy (Project EG005)

Application No	Status
PCT/GB02/03639	Pending

Recorded Owner: Ark Therapeutics Limited

Inventors: Hugh Montgomery, John Martin, Jorge Erusalimsky

Subsequent to the findings discussed above, it has been found that the same compounds have particular utility in the treatment of lipodystrophy in AIDS.

A patent filing was made in the United Kingdom in August 2001. The PCT application identified above was filed in August 2002, and examination has been requested. We await action from the EPO.

Ex-PCT filings are being made, in the same countries as for the earlier case.

We estimate that European and US patents will be granted in 2006. When granted, patents in Europe, the US and Japan can be maintained until 2022, subject to the payment of renewal fees.

### 3.1.3(a)/(b) **Trinam**®

Country	App. No.	Patent No.	Status
EPO	97910563.2		Pending
Australia	47906/97	729420	Granted
Canada	2270286		Pending
China	97180198.3		Pending
Hungary	P9902867		Pending
Japan	521140/98		Pending
South Korea	99-7003881		Pending
Mexico	990488		Pending
Norway	19992106		Pending
Poland	P-333272		Pending
US	09/297486		Pending
US	10/370291		Pending

Recorded Owner: Ark Therapeutics Limited (or its former name of Eurogene Limited)

Inventors: John Martin, Seppo Ylä-Herttuala, Stephen Barker

This invention is based on the discovery that Vascular Endothelial Growth Factor ("VEGF") can be used to treat intimal hyperplasia where the endothelium is intact, i.e. has not been denuded. This means that, by contrast to its known role in angiogenesis and regrowth of the endothelium after angioplasty, VEGF can prevent or treat *de novo* stenosis in other surgical situations. This discovery is not limited to the use of VEGF itself, but can be applied using any agonist of the relevant receptor for VEGF.

A second, related discovery is that the active agent can be delivered perivascularly, without damaging the blood vessel. Thus, any active agent, such as VEGF or a gene expressing VEGF, can be applied effectively to the outside of the vessel, in a biodegradable collar/reservoir.

The first filing on this invention was made in the United Kingdom in November 1996, by University College London. Following assignment to Eurogene Limited, a PCT application was made in November 1997. Subsequently, ex-PCT filings have been made in several countries, as shown above.

This invention is protected by claims defining a method of therapeutic use. There are also claims to the biodegradable collar/reservoir.

Thus far, applications in this family have been examined by the Australian, European and US Patent Offices. The Australian application has been granted.

At the EPO and in the US, an objection has been raised that the use of VEGF and its analogues on the one hand, and the collar on the other, are separate inventions. Ark is currently actively prosecuting the use claims in Europe, and a divisional application relating to the collar will be filed before the existing application is granted. This strategy will overcome the objection raised and we have advised Ark that there is no need to seek protection for the collar until clinical approval is near, for cost reasons. In the US, separate applications are now on file, although the collar case has not yet been examined.

In Europe, the US and Japan, the Examiners have alleged publication of an abstract, by the inventors named on this patent, at a conference prior to the United Kingdom filing date in November 1996. Evidence from the conference organisers has persuaded the European Examiner that this abstract was not in fact made available to the public before the first filing date, and that it can therefore be discounted as prior art. We are confident that the US Examiner will be similarly persuaded.

The US Patent Office has raised various other objections, relating to scope and utility of this patent application. We are evaluating these objections, in correspondence with US attorneys, and believe that they can be overcome.

We estimate that European and US Patents will be granted in 2004. When granted, the patents in Europe, the US and Japan, at least, can be maintained until 2017, subject to the payment of renewal fees.

3.1.3(c) Wrap

Country	App. No.	Patent No.	Status
EPO	99919391.5		Pending
Australia	37193/99	738514	Granted
Canada	2326114		Pending
China	99805533.6		Pending
Hungary	P0101631		Pending
Japan	545514/00		Pending
South Korea	2000-7011341		Pending
Mexico	010167		Pending
Norway	20005398		Pending
Poland	P343725		Pending
US	09/674,232		Pending

Recorded Owner: Ark Therapeutics Limited

Inventors: John Martin, Seppo Ylä-Herttuala, Stephen Barker

This invention relates to a variant of the collar described under case 3.1.3(a)/(b) above. Whereas the collar is described as relatively rigid, this invention involves the use of a flexible wrap of a biodegradable material. From this wrap, as from the collar, an agent (such as VEGF) can be delivered perivascularly.

This family was first filed in the United Kingdom in April 1998. A PCT application was made in April 1999. Subsequently, ex-PCT filings have been made in several countries, as shown above.

The PCT application has claims to the wrap. In the IPER, the EPO has indicated that they are patentable.

In subsequent prosecution at the EPO, it has been argued by the Examiner that there is no novelty with respect to the earlier disclosure of the collar. This case will be considered at a hearing in Munich on 19 April 2004, if not resolved in advance. We have advised Ark that, although amendment of the claims may be necessary, claims may be obtained which will adequately protect its commercialisation of this invention. We expect the hearing to resolve prosecution favourably; although if not, it will be possible to appeal to the EPO Board of Appeal. The US Patent Office has queried the effectiveness of the procedure, and we are providing evidence to show effectiveness and believe these queries can be resolved effectively.

We estimate that European and US patents will be granted in 2004 or 2005. When granted, the patents in Europe, the US and Japan, at least, can be maintained until 2019, subject to the payment of renewal fees.

#### 3.1.4 Kerraboot®

Country	App. No.	Patent No.	Status
EPO	00901208.9	1162932	Granted in 16 states
Australia	21170/00	757482	Granted
Canada	2360569		Pending
China	00803155.X		Pending
Hungary	P0105394		Pending
Israel	144387		Pending
Japan	5959632/00		Pending
South Korea	2001-7009199		Pending
Mexico	007589		Pending
Norway	20013656		Pending
Poland	P349171		Pending
Singapore	200104391-8	82354	Granted
US	09/889,940		Pending

Recorded Owner: Ark Therapeutics Limited

Inventor: Stephen Barker

This case relates to protective boots and gloves, in particular, boots suitable for treatment of leg ulcers. Such boots and gloves comprise a transparent, flexible plastic material, with an opening that can be closed around the affected limb, thereby sealing the affected part to create a warm and moist environment to promote healing. The boot or glove is unpressurised.

United Kingdom patent applications were filed by VC2 Limited in January and July 1999. Following assignment to Ark, a PCT application was filed in January 2000. Ex-PCT applications have been made, in several countries, as shown above.

The PCT and European applications have been searched and examined by the EPO. Although there is close prior art, and it was necessary to resolve European prosecution at a hearing, it was accepted by the EPO that no previous device has the combination of features that are required by Kerraboot®. The novel features of Kerraboot® are its therapeutic utility (as opposed to, say, the mere protection of a cast from contact with water), and sterile packaging.

Similar objections have been raised by the US Examiner. The US attorneys handling the US Application have advised that the objections can be overcome, and will discuss them with the US Examiner, so that a response can be filed shortly. It seems that a US patent will be obtained in substantially the form of that obtained in Europe. If not, an alternative, useful possibility is that claims will be obtained relating to the use of the boot in treating ulcerative conditions. If necessary, the evidence of successful trials with the Kerraboot® at least provides good grounds for arguing that it is patentable.

We estimate that a US patent will be granted in 2004. The European patents and, when granted, patents in the US and Japan, at least, can be maintained until 2020, subject to the payment of renewal fees.

#### 3.1.5 Scavidin®

Country	App. No.	Patent No.	Status
EPO	99906341.5		Pending
Australia	26312/99	750444	Granted
Canada	2319039		Pending
China	99803217.4		Pending
Hungary	P0101614		Pending
Japan	532517/00		Pending
South Korea	2000-7009270		Pending
Mexico	007931		Pending
Norway	20004195		Pending
Poland	P343079		Pending
US	09/622804		Pending

Recorded Owner: Ark Therapeutics Limited (or its former name of Eurogene Limited).

Inventors: Seppo Ylä-Herttuala, Markku Kulomma, Pauliina Lehtolainen, Varpu Marjomaki, Kari Airenne

This invention relates to a novel fusion protein ("Scavidin®") and corresponding gene which, when expressed *in vivo*, allows drug molecules to be targeted to specific sites in tissues. The drugs can then be taken up by the targeted tissues or cells.

This family was first filed in the United Kingdom in February 1998. A PCT application was made in February 1999. Subsequently, ex-PCT filings have been made in several countries, as shown above.

The PCT application, as filed, had broad claims to proteins *per se*. The Examiner at the EPO has alleged that these claims are not new, based on various prior art documents. However, these prior art documents relate to quite different uses, and we now have informal indication that protection will be obtained for a somewhat restricted range of novel compounds (including Scavidin® itself), and corresponding genes expressing them, across the broad scope of therapeutic uses originally sought. A response to the Examiner's objections, pointing out these distinctions, has been filed.

The US Patent Office initially considered claims to the protein. Rather than answer the objections that were raised, Ark decided not to pursue those claims, and to ask the Patent Office to examine the claims of primary interest to Ark, i.e. to the gene encoding Scavidin®. Examination of those claims has not yet started.

We estimate that European and US patents will be granted in 2005. When granted, the patents in Europe, the US and Japan, at least, can be maintained until 2019, subject to the payment of renewal fees.

#### 3.1.6(a) Baculovirus as a Vector

Country	App. No.	Patent No.	Status
EPO	01931975.5		Pending
Australia	2001258657		Pending
Canada	2413326		Pending
China	01810175.5		Pending
Hungary	P0302119		Pending
Israel	153070		Pending
Japan	2001-586586		Pending
South Korea	2002-7015961		Pending
Mexico	2002/011517		Pending
Norway	20025657		Pending
Poland	P360280		Pending
Singapore	200207180-1		Pending
US	10/296265		Pending

Recorded Owner: Ark Therapeutics Limited

Inventors: Seppo Ylä-Herttuala, Kari Airenne

This case relates to the delivery of a gene product using a baculovirus vector. In order to avoid inactivation of this vector by the immune system of the patient being treated, this vector should be delivered to a compartment within the body that is free, or usually free, of blood. In particular, inactivation can be avoided by periadventitial delivery.

A United Kingdom application was filed in May 2000. A corresponding PCT application was made in May 2001.

The PCT application has been searched by the EPO, and prior art has been cited, disclosing a similar vector for administration to nerve compartments. We have advised Ark that there is novelty and potential patentability in periadventitial delivery to blood vessels, and in delivery to the brain, and that this invention is patentable for these applications. The validity of the latter aspect has been confirmed in recent work by Prof. Ylä-Herttuala, and is the subject of a further, more specific application (see below).

We estimate that European and US patents will be granted in 2005. When granted, patents in Europe, the US and Japan, at least, can be maintained until 2020, subject to the payment of renewal fees.

#### 3.1.6(b) Baculovirus Brain Vector

Country	App. No.	Patent No.	Status
EPO	02730459.1		Pending
Canada	2448985		Pending
US	10/478978		Pending

Recorded Owner: Ark Therapeutics Limited Inventors: Seppo Ylä-Herttuala, Kari Airenne

This family relates to the targeted delivery of a gene product, using a baculovirus vector, to the brain. It provides the possibility of specific therapy in brain-related conditions.

A United Kingdom application was filed in May 2001. A corresponding PCT application was made in May 2002. Ex-PCT filings have been made, as indicated above.

The PCT application has been searched and examined by the EPO. The same prior art has been cited as against the case mentioned immediately above. We believe that the targeted aspect of the delivery represents an invention.

We estimate that European and US patents will be granted in 2007. When granted, patents in Europe, the US and Japan, at least, can be maintained until 2022, subject to the payment of renewal fees.

#### 3.1.6(c) **BAAVI/VBV**

Country	App. No.	Patent No.	Status
EPO	02704962.6		Pending
Canada	2440342		Pending
US	10/471488		Pending

Recorded Owner: Ark Therapeutics Limited Inventors: Seppo Ylä-Herttuala, Kari Airenne

This family relates to two specific aspects of the baculovirus technology, i.e. an avidin-pseudotyped vector and a versatile baculovirus vector.

Separate United Kingdom applications were filed in March 2001. For expediency, a combined corresponding PCT application was made in May 2002. Ex-PCT filings have been made, as indicated above.

The PCT application has been searched and examined by the EPO. The IPER confirms that there are two inventions. As far as we can see, both should be patentable, although some limitation of the claims may be necessary.

We estimate that European and US patents will be granted in 2007. When granted, patents in Europe, the US and Japan, at least, can be maintained until 2022, subject to the payment of renewal fees.

## 3.1.6(d) Functional Genomics

Country	App. No.	Patent No.	Status
PCT	PCT/GB03/01029	WO 03/078641	Pending

Recorded Owner: Ark Therapeutics Limited

Inventors: Seppo Ylä-Herttuala, Kari Airenne, Anssi Mahonen

This family relates to the modification of the baculovirus capsid, to enable functional genomics in particular.

Priority for this family lies in a PCT application (now abandoned) filed by Ark in March 2002, where capsid modification was described for the first time.

A corresponding PCT application was made in March 2003. The PCT application has been searched and examined by the EPO. The IPER states that all claims are allowable.

We estimate that European and US patents will be granted in 2007. When granted, patents in Europe, the US and Japan, at least, can be maintained until 2022, subject to the payment of renewal fees.

#### 3.1.7 Exon 6

Country	App. No.	Patent No.	Status
EPO	01978615.1		Pending
Australia	2002210713		Pending
Canada	2426736		Pending
China	01817997.5		Pending
Hungary	P0301523		Pending
Japan	2002-537757		Pending
South Korea	2003-7005188		Pending
Mexico	PA/a/2003/00351		Pending
Norway	2003 1845		Pending
Poland	P362084		Pending
US	10/398616		Pending

Recorded Owner: Ark Therapeutics Limited

Inventors: David Selwood, Ian Zachary, Jia Haiyan, Marianne Loehr and Dana Davis

This family relates to novel peptides which are fragments of VEGF and which have anti-angiogenic properties.

A United Kingdom application was filed in October 2000. A corresponding PCT application was made in October 2001. Ex-PCT filings have been made, as indicated above.

The PCT application has been searched by the EPO. The cited prior art discloses similar peptides, but not the cyclic compound of, we believe, most interest to Ark.

We estimate that European and US patents will be granted in 2007. When granted, patents in Europe, the US and Japan, at least, can be maintained until 2022, subject to the payment of renewal fees.

## 3.1.8 NP1-Antagonist

Country	App. No.	Patent No.	Status
PCT	PCT/GB03/01375	WO 03/082918	Pending

Recorded Owner: Ark Therapeutics Limited

Inventors: David Selwood, Marianne Loehr and Ian Zachary

This family relates to a novel peptide that has NP-1 antagonist activity.

A United Kingdom application was filed in April 2002. A corresponding PCT application was made in April 2003. The PCT application has been searched and examined by the EPO. The IPER states that all claims are allowable.

We estimate that European and US patents will be granted in 2007. When granted, patents in Europe, the US and Japan, at least, can be maintained until 2022, subject to the payment of renewal fees.

## 3.1.9 Oxidised LDL Peptide and Assay (Project EG010)

Country	App. No.	Patent No.	Status
EPO	01949734.6		Pending
Canada	2417798		Pending
Japan	2002-512214		Pending
US	10/333313		Pending

Recorded Owner: Ark Therapeutics Oy

Inventors: Outi Narvanen, Seppo Ylä-Herttuala

This case relates to peptides that can be used in an immunoassay for oxidised low density lipoprotein, as an indicator of coronary heart disease.

A United Kingdom patent application was filed in July 2000, by Medigene Oy. A corresponding PCT application was made in July 2001. Ex-PCT filings have been made in various countries, as shown above.

The PCT and European applications have been searched by the EPO and certain prior art has been cited. The cited prior art relates to similar tests but does not suggest the utility of the particular peptide of most interest to Ark. Accordingly, we do not consider it will prevent these applications being granted.

When first filed, the claims reflected the then belief that the peptides should be derivatised. Research has shown that a simple peptide is most effective. In view of its effectiveness, we believe that the use of this peptide should be patentable, and a response has been filed at the EPO on this basis.

We estimate that European and US patents will be granted in 2005. When granted, patents in Europe, the US and Japan at least can be maintained until 2020, subject to the payment of renewal fees.

## 3.2 Other Patent Filings

Further, as yet unpublished applications have been made, including two United Kingdom applications. These are not detailed in this report for the reasons explained at the beginning of this Section 3A.

#### 3B. THE TRADE MARK PORTFOLIO

The following applications and registrations stand in the name of Ark Therapeutics Limited.

Following discussion with Ark, the number of Classes covered by each mark depends upon the products and services in connection with which the mark is used. Thus marks which are used in connection with only one type of product will cover only one Class, while other marks will cover two or more different Classes if they are used in connection with a greater variety of products or services.

For example, the mark CEREPRO is used in respect of various pharmaceutical preparations and therapeutic agents, all of which are classified under Class 5. Thus applications for this mark will cover only one Class. Meanwhile, the mark PATIENT PLUS is used in respect of dressings and absorbent pads (which are classified under Class 5) and various medical apparatus, instruments and devices (which are classified under Class 10), so any application for this mark will cover two Classes. As a further example, the mark ARK THERAPEUTICS is the house mark and so should cover all the products and services offered by Ark. Thus any application for this mark will cover a wide range of products which are classified variously in Classes 1, 5 and 10, and services which are classified in Class 42.

The trade marks SCAVIDIN (Classes 1 and 5) KERRABOOT (Classes 5 and 10), ARK THERAPEUTICS (Classes 1, 5, 10 and 42), and TRINAM (Classes 5 and 10) have been registered in the United Kingdom.

The trade marks ARK THERAPEUTICS (Classes 1, 5, 10 and 42), SCAVIDIN (Classes 1 and 5) and QUATTROGENE (Classes 1, 5, 10 and 42) have been registered as Community Trade Marks.

The trade marks TRINAM (Classes 5 and 10), SCAVIDIN (Classes 1 and 5), KERRABOOT (Classes 5 and 10) and ARK THERAPEUTICS (Classes 1, 5, 10 and 42) have been registered in the US.

Community Trade Mark applications have been filed to register the trade marks TRONAL, KERRABOOT, CEREPRO, VITOR, PATIENT PLUS and TRINAM, and United States trade mark applications have been lodged in respect of CEREPRO, TRONAL and VITOR (all in Class 5; KERRABOOT, PATIENT PLUS and TRINAM additionally in Class 10). These applications are proceeding normally and no substantive official objections have been made to any of them, nor have any applications been lodged against them.

#### 4. THIRD PARTY RIGHTS

In the course of working for Ark and Ark Therapeutics Oy, we have investigated whether certain third party rights might be infringed by the commercialisation of certain inventions discussed above, including Vitor<sup>™</sup>, Cerepro<sup>™</sup> and Trinam<sup>®</sup>. Other than as set out below, we have no reason to believe that the commercialisation of any of the technologies described above will infringe third party rights. We believe that Ark has negotiated successfully in order to commercialise the active materials used in Trinam<sup>®</sup>, Vitor<sup>™</sup> and Project EG005, and that there are no valid rights that will be infringed by practice of these inventions.

In connection with Vitor<sup>™</sup> and Project EG005, we are aware that Ark is using a compound which was the subject of existing patent protection in the US and Europe. While these patents expired in 2003, the compound is the subject of Supplementary Protection Certificates that extend the proprietor's rights in Europe until 2008. We understand that Ark has reached an agreement with the patent's proprietor intended to facilitate the commercialisation of Vitor<sup>™</sup> and Project EG005 using the compound in Ark's chosen territories,

and in return that Ark has granted that proprietor option rights under Ark's patent rights in Asian countries including Japan.

In connection with Cerepro<sup>TM</sup>, we are aware of US Patent No. 5,631,236 (assigned to Baylor College of Medicine). We have obtained advice from US attorneys that the commercialisation of Cerepro<sup>TM</sup> will not infringe this US patent.

The gene used in Trinam® is the subject of patent rights owned by the Ludwig Institute for Cancer Research and licensed to Ark. It is also claimed generically in an earlier European patent application made by Chugai Seiyaku Kabushiki Kaisha ("Chugai") which, if granted, would potentially involve infringement. We understand that the Ludwig Institute has been advised that it is doubtful that Chugai's claims will be allowed, owing to insufficient disclosure of utility, and we agree that refusal of the application is likely. We understand also that, even in the unlikely event that Chugai obtains patent rights, a licence will be available, and that a licence has already been agreed under Chugai's corresponding US patent application.

Again in connection with Trinam®, we are also aware of US Patent No. 5,527,532 (assigned to Angiotech). It has not been possible to obtain a formal opinion of non-infringement from US attorneys, since the US Patent Office has twice lost the official file papers. The absence of an opinion of non-infringement from a US attorney means that we cannot confirm that Ark would not be liable for triple damages in the event of a successful infringement suit being brought against it in the US. We think it unlikely that there is infringement.

In connection with the work on baculovirus, Ark has had brought to its attention European patent No. 127839 (assigned to The Texas A&M University System). On Ark's behalf, we have explained to the patentee's US attorneys that there can be no infringement by work conducted only in Finland (where the European patent does not extend and where there is no corresponding national patent), or while no use is made of the polyhedrin gene that is specified in the patent's claims. We note that the patent will expire in May 2004.

Practice of the baculovirus technology may require the use of components purchased on terms requiring that they are used only for research purposes. We have advised Ark that care should be taken to ensure that appropriate commercial licences should be obtained, prior to commercialisation.

We are not aware of any potential or pending intellectual property-related litigation involving Ark. Nor are we aware of any third party working commercially within the scope of the patent portfolio summarised above.

Yours faithfully

GILL JENNINGS & EVERY

R E Perry (Partner)

# PART VII — MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

#### **OVERVIEW**

Established in 1997, Ark is an emerging healthcare group with one product introduced into hospitals in the UK and three further lead products in late stage clinical development. These products are supported by a follow-on portfolio of products and pre-clinical programmes. Ark focuses on specialist areas of medicine where development and marketing costs generally are lower and where Orphan Drug Status and/or Fast Track Designation may be available. This strategy minimises the Group's dependency on pharmaceutical partners and allows it to retain control over its research and development programmes.

Ark's historical financial results reflect principally research and development and other administrative expenses. It is expected that research and development expenses will increase significantly for the foreseeable future as Ark's late-stage clinical trial activities and discovery research capabilities are expanded. It is anticipated that other administrative expenses will increase for the foreseeable future with the expansion of the Group's management team to support the increasing scale of operations as its lead products move through late stage clinical development to planned marketing approval.

Ark first recognised revenues in the year ended 31 December 2003. Those limited revenues were attributable to the preliminary introduction of its first approved product, Kerraboot®, to hospitals in the UK in November 2003. The full launch of this product in the UK and US markets is expected in 2004 and, if successful, in other European countries thereafter. In the event that other products complete the clinical development phase and regulatory marketing approval is pursued and granted, it is possible that revenues will also be generated from these products, although the timing or amounts of such revenues cannot be accurately predicted.

Selling and marketing expenses were incurred in the year ended 31 December 2003 in respect of the preliminary introduction of Kerraboot® to hospitals in the UK. It is anticipated that selling and marketing expenses will increase rapidly for the foreseeable future to support the planned full launch of Kerraboot® and in preparation for the potential regulatory marketing approval of other products.

## CRITICAL ACCOUNTING POLICIES

The preparation of consolidated financial statements under generally accepted accounting principles requires management to make certain estimates and judgments that affect reported amounts of assets, liabilities, revenues, expenses and disclosures in the financial statements. Critical accounting policies are those that require the most significant, complex or subjective judgments, which are often as a result of the need to make estimates on matters that are inherently uncertain. Ark's critical accounting policies are those in relation to research and development expenses, share-based compensation, goodwill and deferred tax assets.

## Research and Development Expenses

Ark expenses all research and development costs in the period in which they are incurred. A significant proportion of these costs relate to clinical trials managed by third parties which may take several years to complete. Costs are recognised based on management's estimate of the stage of completion of each trial, which may differ from the payments made to the third party. In assessing the stage of completion, management takes account of factors such as the number of patients enrolled, progress by the enrolled patients through the trial, and contracted costs with clinical research organisations and clinical sites. If management's estimates are incorrect, research and development expenses may be recognised in the wrong period.

#### Share-Based Compensation

In accordance with Urgent Issues Task Force Abstract 17 "Employee share schemes", the cost of awards to employees that take the form of shares or rights to shares is recognised as a charge to the profit and loss account. The amount received, which is the difference between the market value at the date of grant and any exercise price, is charged to the profit and loss account over the period the shares are vested, with a corresponding credit to reserves. Since Ark has not to date had publicly traded shares, management has estimated the market value of such shares based on recent private fund raisings.

#### Goodwill

Following the acquisition of Ark Therapeutics Oy in January 2001, the Group recorded goodwill of £5 million. This goodwill is being amortised over its estimated useful life of four years. Management's estimate of the useful life considers, *inter alia*, the following factors: the expected use of the asset by the entity; any legal, regulatory, or contractual provisions that may limit the useful life; and the effects of demand, competition, and other economic factors (such as the stability of the industry, known technological advances, legislative action that results in an uncertain or changing regulatory environment, and expected changes in distribution channels).

Goodwill is reviewed for impairment when an event that could result in an impairment to goodwill occurs.

## Deferred Tax Assets

Ark has significant deferred assets due to tax losses in the UK and Finland. The realisation of these assets is not assured and is dependent on the generation of sufficient taxable income in the future. Management has exercised judgement in determining the extent of the realisation of these losses based upon estimates of future taxable income in the various jurisdictions in which these tax losses exist. Where there is an expectation that on the balance of probabilities there will not be sufficient taxable profits to utilise these tax losses, the related deferred tax asset is not recognised in the financial statements. If actual events differ from management's estimates, or to the extent that these estimates are adjusted in the future, any changes to the valuation allowance could materially impact our financial position and results of operations. At 31 December 2003 no deferred tax assets have been recognised, as management believes that the realisation of these is not currently foreseeable with reasonable certainty.

#### RESULTS OF OPERATIONS

The following table, which has been extracted without material adjustment from the Accountants' Report set out in Part VIII of this document, sets forth certain data regarding the Group's results of operations for the year ended 31 March 2001, the nine months ended 31 December 2001, the year ended 31 December 2002 and the year ended 31 December 2003. Investors should read the whole of the Accountant's Report as well as this Part VII and should not just rely on the summary information below.

	'000
£.000 E.	
Turnover —	2
Cost of sales	<u>(1)</u>
Gross profit	1
Research and development         (5,021)	,369)
Sales and marketing costs	(319)
Other administrative expenses	,226)
Share-based compensation	594
Administrative expenses	,951)
Other income	110
<b>Operating loss</b>	,209)
Finance income (net)	<u>457</u>
Loss on ordinary activities before taxation	,752)
Tax on loss on ordinary activities	651
Loss on ordinary activities after taxation, being retained loss for the financial period	,101)

# Results of Operations for the Year Ended 31 December 2003 Compared to the Year Ended 31 December 2002

The information in this section has been extracted without material adjustment from the Accountants' Report set out in Part VIII of this document. Investors should read the whole of the Accountant's Report as well as this Part VII and should not just rely on the summary information below.

#### Revenues

Ark recognised revenues of £1,847 for the year ended 31 December 2003. The revenues were attributable to sales of Kerraboot®, which was introduced to hospitals in the UK in November 2003. No revenues were recognised in any period prior to the year ended 31 December 2003.

#### Expenses

Research and development. Research and development expenses primarily comprise the costs associated with the development of Ark's lead products and its follow-on portfolio and represent both clinical development costs and support activities such as manufacturing process development, toxicological testing and regulatory consulting services. The Group's discovery research activities are conducted on-premises by its scientists and through collaborative agreements with academic laboratories. While some of Ark's research and development expenses are the result of internal costs related directly to its employees and facilities, the majority of the expenses are charged to the Group by external service providers, including clinical research organisations and contract manufacturers. The cost of the clinical trial programmes is the most significant portion of development expenses, with the number of patients enrolled in a trial and the attendant level of contract research organisation and clinical site activity being the principal cost determinants. Ark's principal products in clinical trials and under pre-clinical development, and their stage of development are as follows:

Development Stage
Preparation for Phase IV/corroborative study
Currently in Phase III
Currently in Phase II (initial part of approved Phase II/III study)
Currently in Phase II
Currently in Pre-clinical development
Currently in Pre-clinical development

Research and development expenses increased by £0.3 million, or 8 per cent., to £5.4 million for the year ended 31 December 2003 from £5.0 million for the year ended 31 December 2002, primarily due to an increase of £0.3 million in manufacturing process development costs associated with the upgrade of Ark's manufacturing facilities in Finland to comply with cGMP standards.

Selling and marketing. Selling and marketing expenses primarily comprise the internal costs of employees, as well as external costs associated with services provided by a contract sales organisation and marketing agencies.

Selling and marketing expenses of £0.3 million were incurred for the first time in the year ended 31 December 2003, as a result of marketing costs associated with the preliminary introduction of Kerraboot® to hospitals in the UK in November 2003 and the costs of establishing a dedicated agency sales force for the full launch of Kerraboot® in the UK.

Other administrative expenses. Other administrative expenses primarily comprise business development, finance, accounting and general administration costs. These costs are primarily expenses related directly to Group staff, as well as external costs associated with service providers such as accountants, lawyers, insurers and consultants, together with amortisation of goodwill of £1.3 million per annum relating to the acquisition of the Group's Finnish subsidiary, Ark Therapeutics Oy.

Other administrative expenses increased by £0.2 million, or 5 per cent., to £4.2 million for the year ended 31 December 2003 from £4.0 million for the year ended 31 December 2002. An expansion of the Group's business and commercial development activities, including work on the commercialisation of Kerraboot® in the US, accounted for £0.5 million of increased costs. A further in-licensing arrangement to support the EG005 and Vitor™ programmes amounting to £0.3 million was also agreed and patent filing costs and general administrative expenses increased by £0.1 million. These increases in costs were largely offset by one-time costs of £0.8 million incurred in the year ended 31 December 2002 in connection with previous fund-raising efforts.

Share-based compensation. Certain share options were granted, or were to be granted on admission of the Company's shares to a recognised stock exchange, at exercise prices that were, or would have been, less than fair value at the time of the grant. As a result, a share-based compensation charge was recorded in the year ended 31 December 2001 to reflect the difference between the option exercise price and the fair value at the date of grant of the shares issuable upon exercise.

The credit for share-based compensation of £0.6 million for the year ended 31 December 2003 was £0.6 million lower than the credit of £1.2 million for the year ended 31 December 2002 as a result of the recalculation of the charge using current estimates of the number and value of shares which might be issued in the future on a sale or listing.

Other income. Ark recognised other income of £0.1 million for the year ended 31 December 2003 primarily from the receipt of revenue grants from the Finnish government in respect of expenditures on the Group's Finnish manufacturing facilities. No other income was recognised for the year ended 31 December 2002.

Finance income (net). Finance income (net) comprises interest income from a managed money fund, with a small amount of interest expense on several Finnish government loans.

Finance income decreased by £0.3 million, or 38 per cent., to £0.5 million for the year ended 31 December 2003 from £0.8 million for the year ended 31 December 2002 primarily because of lower average cash balances and a lower weighted average interest rate.

Tax on loss on ordinary activities. Ark's tax credit decreased by £0.7 million, or 53 per cent., to £0.7 million for the year ended 31 December 2003 from £1.4 million for the year ended 31 December 2002 primarily because the credit (which is wholly attributable to a UK government research and development tax credit) recognised in the earlier period was in respect of 21 months of losses, rather than twelve months as in 2003. Given the recent enactment of the new UK research and development tax credit legislation, the Group did not recognise the credit for the initial period of nine months ended 31 December 2001 until actual receipt of the tax credits in the year ended 31 December 2002. Subsequently, the Group has recognised the tax credit in the period to which it relates.

### LIQUIDITY AND CAPITAL RESOURCES

The information in this section has been extracted without material adjustment from the Accountants' Report set out in Part VIII of this document. Investors should read the whole of the Accountant's Report as well as this Part VII and should not just rely on the summary information below.

Ark's research and development and other financial requirements have been financed to date primarily through private placements of equity securities. Net proceeds to date from share issues have totalled £31.8 million. In addition, Ark Therapeutics Oy, the Company's Finnish subsidiary, has received grants and loans from the Finnish government totalling £0.7 million. The loans are outstanding at advantageous interest rates, and repayments do not commence for several years. The grants consist of revenue grants in relation to specific manufacturing expenditures, and a deferred grant in respect of capital expenditure for the manufacturing facility. The Group has also received research and development tax credits in the UK totalling £1.4 million to date.

The Group has incurred net losses in each year since its founding, and had an accumulated deficit at 31 December 2003 of £27.8 million. The Group expects to continue to incur net losses at least to the end of 2007 and may incur net losses in subsequent periods. Moreover, the amount of future net losses is highly uncertain.

Cash and cash equivalents decreased from £15.9 million at 31 December 2002 to £9.2 million at 31 December 2003. This £6.7 million decrease is mainly due to the expenditure by Ark of £8.1 million of cash to fund operations and capital expenditures of £0.3 million, offset by UK government research and development tax credits received of £1.0 million and cash from financing activities (interest income and loans) of £0.6 million.

As at 31 December 2003, the Group's cash and cash equivalents amounted to £9.2 million. In addition, the Group anticipates net proceeds from the Offer to total £50.3 million. Following the preliminary introduction of Kerraboot® to hospitals in the UK in November 2003 and the planned full launch of the same product in the UK and US in 2004, Ark anticipates the generation of cash from product sales. The timing and amounts of product sales and the timing of any further regulatory marketing approvals cannot, however, be accurately predicted.

The Group currently anticipates that its existing cash and cash equivalents and the net proceeds from the Offer will be used to fund the continued development of its lead product candidates, investment in manufacturing capacity, the commercial launch of, and subsequent sales and marketing costs of, Kerraboot® and other products as they receive marketing approval, other research and development activities and other general corporate purposes, including capital expenditures and working capital.

The Group believes that its existing cash and cash equivalents, the net proceeds of the Offer and anticipated revenues from the sale of Kerraboot® will be sufficient to fund its operations for the foreseeable future. Its future capital needs and the adequacy of its available funds will depend on many factors, including the cost of clinical studies and other actions needed to obtain regulatory approval of its products in development and the effectiveness of its sales and marketing activities.

#### CONTRACTUAL OBLIGATIONS

A portion of the Group's cash resources will be used to satisfy certain of its contractual obligations. In addition to contractual obligations calling for the payment of uncertain amounts, such as royalties based on possible future products sales or payments required to be made pursuant to research or manufacturing contracts that may be terminated or delayed, the Group has various contractual obligations for which it is contractually obliged or committed to pay a specified amount at a specific point in time. These commitments are for operating leases relating to the Group's administrative and development offices in London and its research and development and manufacturing site in Finland. These leases expire at the end of 2005 and the Group has an option to extend the manufacturing leases to the end of 2010. At 31 December 2003, the Group was committed to making payments under non-cancellable operating leases of £416,000. The following table sets forth, at 31 December 2003, payments on these leases due to be made in the following periods:

Contractual Obligations	Total	Less than 1 year	1-3 years	4-5 years	More than 5 years
- Management - Man	£'000	£'000	£,000	£'000	£'000
Operating Leases	416	234	182	0	0

#### FOREIGN CURRENCY AND INTEREST RATE RISKS

The Group conducts its business primarily in the UK and Europe and plans to have a future presence in North America. Its operations are, therefore, subject to volatility because of currency fluctuations, inflation changes and changes in political and economic conditions in these countries. The Group is subject to foreign currency translation and exchange issues, primarily with regard to its Finnish subsidiary and also with regard to various clinical research organisation contracts in the US and Europe. The Group's expenses and anticipated revenues are sometimes denominated in local currencies, and its results of operations may be affected adversely as currency fluctuations affect pricing and operating costs. The Group engages from time to time in hedging operations, including forward foreign exchange contracts, to reduce the exposure of its cash flows to fluctuations in foreign currency rates. It does not engage in hedging for speculative investment reasons. The Group can give no assurances that its hedging operations will eliminate or substantially reduce risks associated with fluctuating currencies.

The Group's liquid funds are expected to be maintained in interest bearing accounts and/or highly liquid managed money funds. As a result, the Group will be exposed to fluctuations in interest rates.

# SUMMARY OF SIGNIFICANT DIFFERENCES BETWEEN UK GAAP, IAS AND US GAAP Introduction

The Group's Financial Statements and the financial information included in the Accountants' Report in this document have been prepared and presented in accordance with UK Generally Accepted Accounting Principles ("GAAP"). Such standards differ in certain significant respects from US GAAP and International Accounting Standards ("IAS"). Such differences involve the methods for recognising and measuring the amounts shown in the financial statements, financial statement presentation, as well as additional disclosures required by US GAAP and IAS.

Set forth below is a summary of certain significant differences between UK GAAP and US GAAP and between UK GAAP and IAS as of 31 December 2003. Management has not quantified the effect of these differences, nor undertaken a reconciliation between UK GAAP and US GAAP or IAS on the net profit and loss or shareholders' funds of the Group. Had the Group undertaken any such quantification or preparation of a reconciliation, other potentially significant accounting and disclosure differences may have come to its

attention that are not identified below. Accordingly, this summary should not be taken as a complete list of all differences between UK GAAP and US GAAP and UK GAAP and IAS relevant to the Group's Financial Statements. Furthermore, no attempt has been made to identify all disclosures and presentational differences that would affect the manner in which transactions or events are presented in the Group's Financial Statements or notes thereto.

No attempt has been made to identify future differences between UK GAAP and US GAAP and UK GAAP and IAS as the result of prescribed or proposed changes in accounting standards. Regulatory bodies that promulgate UK GAAP, US GAAP and IAS have significant projects ongoing that could affect comparisons such as this.

Furthermore, the summary does not purport to be complete and is subject and qualified in its entirety by reference to the authoritative literature that comprises UK GAAP, US GAAP and IAS.

## Summary of Significant Differences Between UK GAAP and US GAAP

The discussion of US GAAP below does not summarise additional disclosures that might be required by the Securities and Exchange Commission in the context of a registered security offering in the United States of America.

## Recognition and measurement differences

#### Share Option Plans

Under UK GAAP, when options are issued to acquire shares, any compensation charge, calculated as the difference between the fair value of the shares at the grant date and any contribution from the employee, is recognised immediately if they are not subject to any performance criteria or over the period to which the employee's service relates.

US GAAP permits two methods of accounting for stock options: the intrinsic value method and the fair value method. Under the intrinsic value method as set out in Accounting Principles Board Opinion No. 25, Accounting for Stock Issued to Employee, compensation cost equal to the difference between the market price of the shares and the option price on the measurement date (the date upon which both the number of shares the employee is entitled to receive and option price is known) is recognised from the date of grant over the vesting period of options. Where the measurement date occurs after the date of grant, as in the case of performance related options, compensation cost is recorded under variable plan accounting such that the difference between the price of the shares at each balance sheet date and the option exercise price is charged to income over the vesting period and is adjusted in subsequent periods up to the measurement date. Where the performance condition is such that management cannot make a reasonable estimate because the Group cannot control the conditions, such as the successful completion of an initial public offering, no compensation cost is recognised until the performance condition is satisfied. Under the fair value method of accounting as set out in Statement of Financial Accounting Standard (SFAS) No. 123, Accounting for Stock Based Compensation, the total amount of compensation cost represents the estimated fair value of each option determined at the grant date that will eventually vest and is recognised over the vesting period of the option.

SFAS 123 introduced a fair value based method of accounting for stock based compensation. It encourages, but does not require, companies to recognise expense for grants of stock, stock options and other equity instruments to employees based on fair value accounting rules. Companies, which choose not to adopt the intrinsic method, are required to disclose *pro forma* net income and earnings per share under the fair value method. In addition, detailed disclosures are required concerning the plan terms, exercise prices and the assumptions used in measuring fair value of stock based grants.

Under UK GAAP, provision is made for employer's National Insurance contributions on outstanding share options that are expected to be exercised. The provision, calculated by applying the employer's National Insurance rate to the difference between the market value of the underlying shares at the balance sheet date and the option exercise price, is recognised over the vesting period.

Under US GAAP, the liability for employer payroll taxes on stock options is not recognised until the date of the event triggering the measurement and payment of the tax to the taxing authority, which is generally the exercise date.

#### Deferred taxation

Under UK GAAP, deferred taxation is generally recognised in respect of all timing differences that have originated but not reversed at the balance sheet date where transactions or events that result in an obligation to pay more, or a right to pay less, tax in the future have occurred at the balance sheet date. Deferred tax assets are recognised to the extent that it is regarded as more likely than not they will be recovered. Deferred taxes may be recorded on a discounted basis.

Deferred taxation is measured on a discounted or non-discounted basis at the rates that are expected to apply in the periods in which timing differences reverse, based on tax rates and laws enacted or subsequently enacted at the balance sheet date.

Under US GAAP, deferred taxation is provided for the tax effect of all temporary differences between tax and book bases of assets and liabilities at the applicable enacted statutory tax rate at the balance sheet date. Certain items that are treated as permanent differences under UK GAAP are treated as temporary differences under US GAAP. Deferred tax assets are recognised in full subject to a valuation allowance to reduce the amount of such assets to that which is more likely than not to be realised. The probability of future taxable income as well as tax planning strategies should be considered in determining the realisability of deferred tax assets.

Under US GAAP deferred taxes may not be discounted and are based on tax rates and laws enacted at the balance sheet date.

## Business combinations and goodwill

Under UK GAAP, FRS No. 10, Goodwill and Intangible Assets, the excess of the purchase price paid over the underlying fair value allocated to the assets and liabilities acquired must be capitalised and amortised over its estimated useful life not exceeding 20 years. Intangible assets are recognised separately from goodwill if their value can be measured reliably on initial recognition and they can be disposed of separately without disposing of the business itself.

Under US GAAP, the excess of the purchase price paid over the underlying fair value allocated to the identifiable assets (including intangibles) and liabilities acquired is recorded as goodwill. In July 2001 the Financial Accounting Standards Board issued SFAS No. 141, *Business Combinations*, and SFAS No. 142, *Goodwill and Other Intangible Assets*. SFAS 141 and 142 were effective for all business combinations initiated after 30 June 2001. SFAS 141 requires that intangible assets be recognised separately from goodwill if they arise from contractual or other legal rights (regardless of whether those rights are transferable or separable from the acquired entity or from other rights and obligations) or they are separable, that is, it is capable of being separated or divided from the acquired entity and sold, transferred, licensed, rented or exchanged. SFAS 142 requires that goodwill, including previously existing goodwill, and intangible assets with indefinite useful lives should not be amortised but should be tested for impairment at least annually. Intangible assets that do not have an indefinite life are amortised over their estimated useful life.

#### Revenue recognition

Revenue is recorded in the profit and loss account under UK GAAP where the Group enters into an exchange transaction with a customer, when, and to the extent that, it obtains the right to consideration in exchange for its performance.

Under US GAAP, revenue is generally recorded when it is realised and earned. Generally, the following criteria must be met for revenue to be considered realised and earned:

- · Persuasive evidence of an arrangement exists;
- · Delivery has occurred or services have been rendered;
- The seller's price to the buyer is fixed and determinable; and
- Collectibility is reasonably assured.

Differences in the timing of revenue recognition may exist between UK and US GAAP.

## Inventories

Under UK GAAP the capitalisation of fixed and variable overheads is based on the normal capacity of the production facilities, with unallocated overheads expensed as incurred. When the cost of inventory is no longer recoverable, UK GAAP requires it to be written down to net realisable value, estimated as selling price less the costs of completion, if any, and sales costs. Under UK GAAP, inventory write-downs can be reversed.

US GAAP does not address whether the costs of idle capacity and spoilage can be included as part of the cost of inventory. When the cost of inventory is no longer recoverable, US GAAP requires its carrying amount to be written down to the lower of cost or market. Market means current replacement cost except that it cannot exceed net realisable value and it cannot be less than net realisable value reduced by an allowance for an approximately normal profit margin. In addition, under US GAAP inventory, write-downs create a new cost basis, and as such cannot be reversed.

## Impairment of long-lived assets

Under UK GAAP, if there is an indication of impairment long lived assets should be tested for impairment and, if necessary written down to their recoverable amount, being the higher of net realisable value or value in use. Value in use should be calculated based on discounted future pre-tax cash flows related to the asset or the income generating unit to which the asset belongs. An income-generating unit is a group of assets, liabilities and associated goodwill that generates income that is largely independent of the Group's other income streams.

Under UK GAAP, capitalised goodwill balances must be reviewed for impairment at the end of the first year following the acquisition and again if there is a change of circumstances in future years indicating an impairment in value.

Under US GAAP there are different impairment tests for goodwill, intangible assets with indefinite lives and other long-lived assets.

Under US GAAP, SFAS 142 requires that capitalised goodwill be tested annually for impairment under a two step approach. The first step of the impairment test is performed by comparing the fair value of the reporting unit with the book value of the reporting unit. A reporting unit is defined as an operating segment, or one level lower. Where the book value is higher than the fair value of the reporting unit, the second step of the impairment test is performed in order to calculate the amount of the impairment to goodwill. The amount of the impairment loss is reported in the income statement as a component of operating income.

Under US GAAP intangible assets, other than goodwill, that are not subject to amortisation are tested for impairment at least annually. The impairment test compares the fair value of the intangible asset with its carrying amount and any excess of the carrying value over fair value is recorded through the income statement.

Under US GAAP, an entity is required to assess whether impairment of other long-lived assets has occurred based on the future cash flows (undiscounted and excluding interest) expected to result from use and eventual disposal of the asset. An impairment loss exists if the sum of these cash flows is less than the carrying amount of the asset. The impairment loss recognised in the income statement is based on the asset's fair value, being either market value or the sum of discounted future cash flows.

An impairment loss under US GAAP establishes a new cost basis and therefore cannot be reversed in subsequent accounting periods.

## Derivatives and hedging activities

Under UK GAAP financial instruments are recorded at cost or proceeds received and any premiums or fees are amortised over the life of the instrument. Gains and losses on hedging of existing assets or liabilities are included in the carrying amounts of those assets or liabilities and are ultimately recognised in the profit and loss account as part of those carrying amounts. Gains and losses on qualifying hedges of firm commitments or anticipated transactions are also deferred and are recognised in the profit and loss account or as adjustments of carrying amounts when the hedged transaction occurs.

In June 1998, the Financial Accounting Standards Board issued SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities, SFAS 133 was effective for accounting periods beginning after 15 June 2000. SFAS 133 requires all derivative instruments, including certain derivative instruments embedded in other contracts to be recorded on the balance sheet at their fair value. Changes in the fair value of derivatives are recorded each period in earnings unless specific hedge accounting criteria are met. Where the derivative qualifies for hedge accounting, changes in fair value are recorded in earnings or other comprehensive income (a separate component of equity) depending on whether a derivative is designated as

part of a hedge transaction and, if it is, the type of hedge transaction and whether or not the hedge is effective. For fair value hedge transactions in which a company is hedging changes in fair value of an asset, liability or firm commitment, changes in the fair value of the derivative will generally be offset in the income statement by changes in the hedged item's fair value, attributable to the risk being hedged.

For cash flow hedge transactions, in which a company is hedging the variability of cash flows related to a variable rate asset, liability or a forecasted transaction, changes in the fair value of the derivative instrument are initially reported in other comprehensive income and then reclassified into earnings in the periods in which the earnings are impacted by the variability of the cash flows of the hedged item. The ineffective portion of all hedges is recognised in current period earnings.

In order to qualify for hedge accounting under SFAS 133, a company must formally document, designate and assess, at least quarterly, the effectiveness of transactions that qualify for hedge accounting.

Under UK GAAP transactions, contracts, assets and liabilities denominated in foreign currencies can be recorded at the forward contract price in a hedging contract. Under US GAAP this is not permitted. Instead transactions are recorded at the exchange rate prevailing on the date of the transaction and the forward contract recorded at fair value. Such a forward contract may qualify for hedge accounting under SFAS 133, as discussed above.

## Presentation and classification differences

## Presentation of financial information

Under UK practise, the financial information included in the Accountants' Report on the Group is derived from the audited financial statements of the Group, as discussed under the "Basis of Preparation" heading in such Accountants' Report in accordance with the Statements of Investment Circular Reporting Standards issued by the UK Auditing Practices Board.

In the United States similar documents normally contain audited financial statements and unaudited interim financial information. Furthermore, the form of the Accountants' Report does not comply with US generally accepted auditing standards.

#### Balance sheet presentation

The format of a balance sheet prepared in accordance with UK GAAP differs in certain respects from US GAAP. UK GAAP requires assets to be presented in ascending order of liquidity in accordance with the requirements of the Companies Act 1985, whereas under US GAAP assets are presented in descending order of liquidity. In addition, current assets under UK GAAP include amounts that fall due after more than one year, whereas under US GAAP, such assets are classified as non-current assets.

## Preference shares

Under UK GAAP, preference shares are presented in the balance sheet as part of shareholders' funds.

Under US GAAP, redeemable preference shares are classified in the balance sheet between "long-term debt and stockholders" equity, but are not aggregated in either. All other classes of shares are accounted for as equity instruments.

In May 2003, the FASB issued SFAS No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity, which establishes standards for how an issuer classifies and measures certain financial instruments with characteristics of both liabilities and equity.

Under SFAS 150, financial instruments that embody an unconditional obligation requiring the issuer to redeem it by transferring its assets at a specified or determinable date (or dates) or upon an event (mandatorily redeemable securities) or that embody an obligation to repurchase the issuer's equity shares, or are indexed to such an obligation, and that require or may require the issuer to settle the obligation by transferring assets or by issuing a variable number of its equity shares, when certain conditions are met, are accounted for as liabilities.

#### Exceptional items

UK GAAP requires profits and losses in relation to the disposal of fixed assets to be shown separately on the face of the profit and loss account below operating profit. In addition, exceptional items that are a

result of the ongoing activities but significant because of their size or nature may be separately highlighted on the face of the profit and loss account.

Under US GAAP there is no concept of exceptional items and profits and losses in relation to the disposal of fixed assets and exceptional items are included in operating income. Items that form part of operating activities and are significant in size or nature may be separately highlighted on the face of the profit and loss account or in the accompanying notes.

## Statement of cash flows

Under UK GAAP, the consolidated statement of cash flow is presented in accordance with FRS No. 1 (revised), Cash flow statements. Its objectives and principles are similar to US GAAP as set out in SFAS No. 95, Statements of Cash Flows. The principal difference between the standards is in respect of classification. Under FRS 1 the Group presents its cash flow for: (a) operating activities; (b) returns on investments and servicing of finance; (c) taxation; (d) capital expenditure and financial investment; (e) acquisitions and disposals; (f) equity dividends paid; (g) management of liquid resources; and (h) financing. Under US GAAP, SFAS 95 requires only three categories of cash flow activity: operating activities; investing activities; and financing activities.

Under FRS 1, cash includes deposits and overdrafts repayable on demand while movements on short-term investments are included in management of liquid resources. SFAS 95 defines cash and cash equivalents as also including highly liquid short-term investments, with original maturities of three months or less, and excludes overdrafts.

Cash flows arising from taxation and returns on investments and servicing of finance under FRS 1 would be included as operating activities under SFAS 95. Cash flows relating to capital expenditures and financial investment and acquisitions and disposals would be included as investing activities under SFAS 95. Equity dividend payments would be included as a financing activity under SFAS 95.

#### Summary of Significant Differences Between UK GAAP and IAS

Ark will be required to prepare consolidated accounts under IAS for the year ending 31 December 2005, including comparative figures for the year ending 31 December 2004.

The Directors continue to assess the impact of IAS, with reference to both existing and emerging accounting guidance. A summary of certain significant differences between UK GAAP and IAS is presented below.

#### Research and development

Both IAS and UK GAAP require research costs to be expensed. UK GAAP allows development costs to be capitalised if certain criteria are met. IAS requires capitalisation if similar criteria are met, and requires justification of amounts capitalised using an impairment test. The amount capitalised is then required to be amortised over the period that the Group is expected to benefit from the development.

To date, the Group has expensed all development expenditure as incurred. This treatment will need to be considered in the light of the first time IAS implementation guidance to determine whether such expenditure should be capitalised. For ongoing development projects, the Directors will be required to assess the criteria mandated under IAS on a programme-by-programme basis, with a particular focus on the Group's ability to generate probable future economic benefits following appropriate regulatory approvals.

## Deferred taxation

UK GAAP (for years ending on or after 23 January 2002) requires the income statement liability method to be used in accounting for deferred tax, that is, deferred tax is provided on timing differences between the profit determined for accounting and tax purposes together with tax relating to obligations existing at the balance sheet date. Discounting is permitted with the unwinding of the discount included in the tax expense.

IAS requires the balance sheet liability method to be used, that is, deferred tax is provided on the temporary difference between the accounting book value and the tax value of balance sheet assets and liabilities. Certain exemptions are available. Discounting is not permitted.

### Share-based payments

The Group operates various share ownership plans. Under IAS, the fair value of share option awards will be recognised in the profit and loss account over the vesting period. Under UK GAAP, in accordance with UITF17, the difference between the exercise price of an option and the fair value of the share at the date of grant is taken to the profit and loss account as a compensation charge and spread over the performance period.

There are developments within IAS that are presently being considered that may require the Company to record the cost of making share based payments at fair value to employees and suppliers under both UK GAAP and IAS.

The draft standard in the UK, FRED 31, proposes that transactions involving the purchase of goods and services with payment made in shares or options should be measured at the fair value of the shares or options. It will apply to all employee share and share option schemes, and cash incentive schemes where the amount of the cash payment is based on the share price, as well as all other share based payment transactions involving goods and non-employee services.

Guidance under IAS has not yet been finalised. However, it is generally expected that the IAS, when issued, will be similar to FRED 31 in most key respects.

#### Foreign currency translation

IAS and UK GAAP both require use of the net investment method, with two differences. Firstly, IAS requires income and expense items to be translated at the average rate for the period, while UK GAAP permits use of either the average or closing rate. Secondly, both UK GAAP and IAS require that net exchange differences are taken to reserves, however IAS requires recycling of the gain or loss to the income statement on disposal, whilst UK GAAP prohibits further reporting in the profit and loss account.

## Financial instruments — Hedging

IAS sets a variety of criteria that must be met for hedge accounting to be allowed. These criteria include certain documentation requirements and a requirement to determine the effectiveness of hedges. Ark has entered into certain limited hedging arrangements and is in the process of assessing the impact of IAS in this area.

#### PART VIII — ACCOUNTANTS' REPORT ON THE GROUP

ACCOUNTANTS' REPORT ON ARK THERAPEUTICS GROUP PLC FOR THE THREE YEARS AND NINE MONTHS ENDED 31 DECEMBER 2003

# Deloitte.

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3 March 2004

Dear Sirs

#### Ark Therapeutics Group plc ("the Company") and its subsidiaries ("the Group")

We report on the financial information of the Group set out below. This financial information has been prepared for inclusion in the Listing Particulars dated 3 March 2004.

## Basis of preparation

The financial information set out in this report, which has been prepared on the basis set out below and in accordance with applicable United Kingdom generally accepted accounting principles, is based on the audited consolidated financial statements of the Group for the two years ended 31 December 2003, the nine months ended 31 December 2001 and the year ended 31 March 2001, after making such adjustments as we considered necessary.

## Responsibility

Such financial statements are the responsibility of the directors of the Company who approved their issue.

The directors of the Company are responsible for the contents of the Listing Particulars in which this report is included.

It is our responsibility to compile the financial information set out in our report from the financial statements, to form an opinion on the financial information and to report our opinion to you.

#### Basis of opinion

We conducted our work in accordance with the Statements of Investment Circular Reporting Standards issued by the Auditing Practices Board in the United Kingdom. Our work included an assessment of evidence relevant to the amounts and disclosures in the financial information. The evidence included that recorded by the auditors who audited the financial statements underlying the financial information for the year ended 31 March 2001 and the nine months ended 31 December 2001, the evidence obtained by our predecessor firm Deloitte & Touche relating to the audit of the financial statements underlying the financial information for the year ended 31 December 2002 and the evidence obtained by us relating to the audit of the financial statements underlying the financial information for the year ended 31 December 2003. It also included an assessment of significant estimates and judgements made by those responsible for the preparation of the financial statements underlying the financial information and whether the accounting policies are appropriate to the entity's circumstances, consistently applied and adequately disclosed.

We planned and performed our work so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial information is free from material misstatement whether caused by fraud or other irregularity or error.

Our work has not been carried out in accordance with auditing or other standards and practices generally accepted in the United States or other jurisdictions and accordingly should not be relied upon as if it had been carried out in accordance with those standards and practices.

## **Opinion**

In our opinion, the financial information set out below gives, for the purposes of the Listing Particulars, a true and fair view of the state of affairs of the Group as at the dates stated and of its losses, cash flows and recognised gains and losses for the periods then ended.

#### **ACCOUNTING POLICIES**

A summary of the principal accounting policies, all of which have been applied consistently throughout all periods presented, is set out below:

## a) Basis of accounting

The financial statements have been prepared under the historical cost convention and in accordance with applicable United Kingdom accounting standards, applied on a consistent basis.

## b) Basis of consolidation

The Group financial statements consolidate the financial statements of the Company and its subsidiary undertakings drawn up to 31 December 2003, 31 December 2002, 31 December 2001 and 31 March 2001.

#### Corporate restructuring

During the year ended 31 December 2002, Ark Therapeutics Group plc carried out a corporate restructuring consisting of the introduction of a new holding company. The new holding company was incorporated under the name Firstjasper plc and registered in England and Wales with registered number 4313987 on 31 October 2001. On 1 February 2002 its name was changed to Ark Therapeutics Group plc. On 24 April 2002 Ark Therapeutics Group plc acquired the entire issued ordinary share capital of Ark Therapeutics Limited in exchange for the issue of shares to shareholders on a one-for-one basis, and on 25 April 2002 it received a trading certificate under section 117 of the Companies Act. On 15 August 2002 Ark Therapeutics Group plc was re-registered as a private company, Ark Therapeutics Group Limited. On 25 February 2004 Ark Therapeutics Group Limited was re-registered as a public limited company, Ark Therapeutics Group plc.

The restructuring represented a change in the identity of the holding company rather than an acquisition of the business. Consequently, the restructuring has been accounted for using merger accounting principles.

Therefore, although Ark Therapeutics Group plc did not become the parent company of the Group until 24 April 2002, the Group financial information is presented as if the companies had always been part of the same Group. Balance sheet comparatives are restated on the combined basis.

In accordance with sections 131 and 133 of the Companies Act 1985, Ark Therapeutics Group plc has taken no account of any premium on the shares issued to acquire Ark Therapeutics Limited and has recorded the cost of the investment at the nominal value of the shares issued. The resulting difference arising on consolidation has been credited to a merger reserve.

#### Other acquisitions

Other than in respect of the corporate restructuring above, the results of subsidiaries acquired or sold are consolidated for the periods from or to the date on which control passed. Acquisitions are accounted for under the acquisition method.

#### c) Intangible assets - Goodwill

Goodwill arising on the acquisition of subsidiary undertakings and businesses, representing any excess of the fair value of the consideration given over the fair value of the identifiable assets and liabilities acquired, is capitalised and written off on a straight-line basis over its useful economic life. Provision is made for any impairment.

## d) Research and development

Research and development expenditure is written off as incurred.

## e) Tangible fixed assets

Tangible fixed assets are stated at cost, net of depreciation and provision for impairment. Depreciation is provided on all tangible fixed assets, at rates calculated to write off the cost, less estimated residual value, of each asset on a straight-line basis over its expected useful life, as follows:

Laboratory equipment — 20 per cent. per annum
Office equipment — 33 per cent. per annum

Leasehold improvements — 20 per cent. per annum or the life of the lease

## f) Foreign currency

Transactions in foreign currencies are recorded at the rate of exchange at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are reported at the rates of exchange prevailing at that date. Any gain or loss arising from a change in exchange rates subsequent to the date of the transaction is included as an exchange gain or loss in the profit and loss account.

The results of overseas operations are translated at the average rates of exchange during the period and their balance sheets at the rates ruling at the balance sheet date. Exchange differences arising on translation of the opening net assets and results of overseas operations and on foreign currency borrowings are reported in the statement of total recognised gains and losses. All other exchange differences are included in the profit and loss account.

#### g) Leases

Assets held under finance leases, which confer rights and obligations similar to those attached to owned assets, are capitalised as tangible fixed assets and are depreciated over the shorter of the lease terms and their useful lives. The capital elements of future lease obligations are recorded as liabilities, while the interest elements are charged to the profit and loss account over the period of the leases to produce a constant rate of charge on the balance of capital repayments outstanding. Hire purchase transactions are dealt with similarly, except that assets are depreciated over their useful lives.

Rentals under operating leases are charged on a straight-line basis over the lease term, even if the payments are not made on such a basis.

#### h) Taxation

Current tax, including UK corporation tax and foreign tax, is provided at amounts expected to be paid (or recovered) using the tax rates and laws that have been enacted by the balance sheet date.

Deferred tax is recognised in respect of all timing differences that have originated but not reversed at the balance sheet date where transactions or events that result in an obligation to pay more tax in the future or a

right to pay less tax in the future have occurred at the balance sheet date. Timing differences are differences between the Group's taxable profits and its results as stated in the accounts that arise from the inclusion of gains and losses in tax assessments in periods different from those in which they are recognised in the accounts.

A net deferred tax asset is regarded as recoverable and therefore recognised only when, on the basis of all available evidence, it can be regarded as more likely than not that there will be suitable taxable profits from which the future reversal of the underlying timing differences can be deducted.

Deferred tax is measured at the average tax rates that are expected to apply in the periods in which the timing differences are expected to reverse, based on tax rates and laws that have been enacted or substantively enacted by the balance sheet date. Deferred tax is measured on a non-discounted basis.

#### i) Debt

Debt is initially stated at the amount of the net proceeds after deduction of issue costs. The carrying amount is increased by the finance cost in respect of the accounting period and reduced by payments made in the period.

#### j) Investments

Fixed asset investments are shown at cost less provision for impairment.

#### k) Stocks

Stocks are stated at the lower of cost and net realisable value.

#### 1) Pension costs

The Group makes contributions to employees' personal pension plans. The amount charged to the profit and loss account in respect of pension costs is the contribution payable in the year. Differences between contributions payable in the year and contributions actually paid are shown as either accruals or prepayments in the balance sheet.

#### m) Government grants

Government grants relating to tangible fixed assets are treated as deferred income and released to the profit and loss account over the expected useful lives of the assets concerned. Other grants are credited to the profit and loss account as the related expenditure is incurred.

## n) Employee share option plans

In accordance with Urgent Issues Task Force Abstract 17 "Employee share schemes", the cost of awards to employees that take the form of shares or rights to shares is recognised as a charge to the profit and loss account. The amount received, which is the difference between the market value at the date of grant and any exercise price, is charged to the profit and loss account over the period the shares are vested, with a corresponding credit to reserves.

## o) Derivative financial instruments

The Group uses derivative financial instruments to reduce exposure to foreign exchange risk. The Group does not hold or issue derivative financial instruments for speculative purposes.

For a forward foreign exchange contract to be treated as a hedge the instrument must be related to actual foreign currency assets or liabilities or to a probable commitment. It must involve the same currency or similar currencies as the hedged item and must also reduce the risk of foreign currency exchange movements on the Group's operations. Gains and losses arising on these contracts are deferred and recognised in the profit and loss account, or as adjustments to the carrying amount of fixed assets, only when the hedged transaction has itself been reflected in the Group's financial statements. If an instrument ceases to be accounted for as a hedge, for example because the underlying hedged position is eliminated, the instrument is marked to market and any resulting profit or loss recognised at that time.

# PERIODS ENDED 31 DECEMBER 2003, 31 DECEMBER 2002, 31 DECEMBER 2001 AND 31 MARCH 2001

## CONSOLIDATED PROFIT AND LOSS ACCOUNTS

	Notes	Year ended 31 March 2001 £'000	9 months ended 31 December 2001 £'000	Year ended 31 December 2002 £'000	Year ended 31 December 2003 £'000
Turnover					2 000
Cost of sales		_			(1)
Gross profit					1
Research and development		<u>(2,168)</u>	(3,404)	(5,021)	(5,369)
Sales and marketing costs					(319)
Other administrative expenses		(1,549)	(2,232)	(4,036)	(4,226)
Share-based compensation	2		(3,661)	1,156	<u>594</u>
Administrative expenses		(1,549)	(5,893)	(2,880)	(3,951)
Other income				15	110
Operating loss	1	(3,717)	(9,297)	(7,886)	(9,209)
Finance income (net)	3	712	684	764	457
Loss on ordinary activities before					
taxation	1,4	(3,005)	(8,613)	(7,122)	(8,752)
Tax on loss on ordinary activities	7	(1)		_1,399	<u>651</u>
Loss on ordinary activities after taxation, being retained loss for the financial					
period	17	(3,006)	(8,613)	<u>(5,723)</u>	(8,101)
Loss per share	8	£	£	£	£
Basic and diluted (post restructuring)	8	(0.06)	(0.12)	(0.07)	(0.10)

All results are from continuing operations.

The loss per share is based on the weighted average number of shares adjusted to reflect the restructuring of share capital on listing of the Company (see note 25) and is presented as if the share restructuring had happened at the beginning of the period under review.

# STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES

$\frac{\text{Notes}}{\$'000}  \frac{2001}{\$'000}  \frac{2002}{\$'000}$	£'000
Loss for the financial period (3,006) (8,613) (5,723)	(8,101)
Currency translation losses on foreign currency net investments	(12)
relating to the period $(3,006)$ $(8,614)$ $(5,729)$	(8,113)
CONSOLIDATED BALANCE SHEETS	
$\frac{\text{Notes}}{\frac{2001}{\text{£'000}}} = \frac{31 \text{ March}}{\frac{2001}{\text{£'000}}} = \frac{31 \text{ December}}{\frac{2002}{\text{£'000}}} = \frac{3}{\text{£'000}}$	1 December 2003 £'000
Fixed assets	
Goodwill	1,306
Tangible assets	835
<u>4,832</u> <u>3,994</u> <u>3,242</u>	2,141
Current assets	
Stocks 12 — — —	9
Debtors	1,018
Short-term investments       1,000       —       —         Cash at bank and in hand       10,947       22,520       15,889	0.159
	9,158
12,104 22,703 17,348  Creditors: Amounts falling due within one	10,185
year	(2,583)
Net current assets	7,602
Total assets less current liabilities	9,743
than one year	(487)
Net assets	9,256
Capital and reserves	
Called-up share capital	58
Merger reserve	36,989
Profit and loss account	(27,791)
Total shareholders' funds         18         15,441         24,798         17,963	9,256
Analysis of shareholders' funds	0.006
Equity shareholders' funds	9,206 50
15,441 24,798 17,963	9,256

# CONSOLIDATED CASH FLOW STATEMENTS

	Notes	Year ended 31 March 2001	9 months ended 31 December 2001	Year ended 31 December 2002	Year ended 31 December 2003
		£,000	£'000	£'000	£,000
Net cash outflow from operating					
activities	20	(2,828)	(4,311)	(7,434)	(8,114)
Returns on investments and servicing of					
finance	21	721	686	765	458
Taxation	21			366	1,034
Capital expenditure and financial					
investment	21	(21)	(121)	(582)	(257)
Acquisitions and disposals	21	(8)			
Cash outflow before management of					
liquid resources and financing		(2,136)	(3,746)	(6,885)	(6,879)
Management of liquid resources	21	(1,000)	1,000	_	_
Financing	21	13,988	14,319	254	169
Increase (decrease) in cash in the period	22	10,852	11,573	(6,631)	<u>(6,710)</u>

## 1. SEGMENTAL INFORMATION

There is only one class of business, which is the discovery, development and commercialisation of products in areas of specialist medicine with particular focus on vascular disease and cancer.

The analysis of operating loss, loss before taxation and the net assets of the Group by geographical segment is as follows:

	Year ended 31 March 2001			
	UK	Finland	US	Total
	£'000	£'000	£'000	£'000
Operating loss	(3,610)	(107)		<u>(3,717)</u>
Loss before taxation	(2,898)	(107)		(3,005)
Net assets	<u>15,371</u>			<u>15,441</u>
	Nine mo	nths ended	31 Decem	ber 2001
	UK	Finland	US	Total
	£,000	£'000	£'000	£'000
Operating loss	(8,752)	(545)		<u>(9,297)</u>
Loss before taxation	<u>(8,068</u> )	(545)		<u>(8,613</u> )
Net assets	<u>24,606</u>	192		<u>24,798</u>
	Year	ended 31 D	ecember	2002
	<u>UK</u>	Finland	<u>US</u>	<u>Total</u>
	£,000	£'000	£'000	£'000
Operating loss	<u>(6,632)</u>	<u>(1,254</u> )		<u>(7,886)</u>
Loss before taxation	<u>(5,862</u> )	<u>(1,260)</u>		<u>(7,122)</u>
Net assets	17,948	<u>15</u>		17,963
	Year ended 31 December 2003			
	UK	Finland	US	Total
	£'000	£'000	£'000	£'000
Operating loss	<u>(7,223)</u>	<u>(1,731)</u>	<u>(255</u> )	<u>(9,209</u> )
Loss before taxation	(6,769)	<u>(1,728)</u>	<u>(255</u> )	(8,752)
Net assets	9,298	58	<u>(100)</u>	9,256

## 2. ADMINISTRATIVE EXPENSES

The share-based compensation charge (credit) in each period was as follows:

	Year ended 31 March 2001	9 months ended 31 December 2001		Year ended 31 December 2003	
	£'000	£,000	£'000	£'000	
Share-based compensation		3,661	<u>(1,156)</u>	(594)	

The share-based compensation charge of £3,661,000 in the nine months ended 31 December 2001 arose in respect of share options or shares which have been granted or will be granted or issued on listing on a recognised stock exchange at less than fair value. These share options are exercisable or the shares are issuable upon the listing of the Company on a recognised stock exchange. The number of share options or shares to be issued on listing varies according to defined criteria, including the valuation of the Company on listing.

The credit of £1,156,000 in the year ended 31 December 2002 arose from revision of the basis of the assumptions within the calculation of the share-based compensation provision following the Directors' reassessment of the expected valuation of the Company on listing and therefore the number of share options to be granted or shares to be issued.

The share-based compensation credit of £594,000 in the year ended 31 December 2003 arose from a further reassessment of the expected number of share options to be granted or shares to be issued.

Administrative expenses in the year ended 31 December 2002 include £792,931 of exceptional expenses incurred in connection with the Company's application for listing on the London Stock Exchange. In May 2002, the Directors decided to postpone the application.

## 3. FINANCE INCOME (NET)

	Year ended 31 March 2001	March 31 December 31 December		Year ended 31 December 2003
	£'000	£'000	£'000	£'000
Investment Income				
Bank interest receivable	723	684	764	457
Bridging loan interest payable	<u>(11</u> )			
	<u>712</u>	<u>684</u>	764	<u>457</u>

## 4. LOSS ON ORDINARY ACTIVITIES BEFORE TAXATION

Loss on ordinary activities before taxation is stated after charging:

	Year ended 31 March 2001	9 months ended 31 December 2001	Year ended 31 December 2002	Year ended 31 December 2003
	£'000	£'000	£'000	£'000
Depreciation and amounts written off owned				
tangible assets				
owned	34	33	81	145
— held under finance leases		<del></del>	5	11
Amortisation of goodwill	261	940	1,254	1,254
Operating lease rentals				
plant and machinery	2	10	5	12
— other	55	81	140	234
Auditors' remuneration for audit services:				
— Deloitte & Touche			14	18
Arthur Andersen	6	16	4	
Auditors' remuneration for non-audit services:				
— Deloitte & Touche			10	122
— Arthur Andersen	3	<u>27</u>	<u> 189</u>	

The auditors for the year ended 31 December 2003 were Deloitte & Touche LLP. The auditors for the year ended 31 December 2002 were Deloitte & Touche and for the periods ended 31 December 2001 and 31 March 2001 were Arthur Andersen.

## 5. EMPLOYEE NUMBERS AND STAFF COSTS

The average monthly number of employees (including executive directors) was:

	Year ended 31 March 2001	9 months ended 31 December 2001	Year ended 31 December 2002	Year ended 31 December 2003
	Number	Number	Number	Number
Finance and administration	5	8	8	8
Development	4	10	7	8
Manufacturing			10	19
Research	5	11	14	16
		<u>29</u>	<u>39</u>	51
	£'000	£'000	£,000	£'000
Their aggregate remuneration comprised:				
Wages and salaries	837	1,101	1,693	2,288
Social security costs	95	88	179	266
Other pension costs	_60	85	133	216
	992	1,274	2,005	2,770

The wages and salaries analysis above excludes the effects of the share-based compensation charge or credit during the period, which is described in note 2.

## 6. DIRECTORS' REMUNERATION

## Remuneration

The remuneration of the Directors was as follows:

	Year ended 31 March 2001 £'000	9 months ended 31 December 2001 £'000	Year ended 31 December 2002 £'000	Year ended 31 December 2003 £'000
Aggregate emoluments	525	454	608	622
Money purchase pension contributions	_23	<u>19</u>	_30	_32
	<u>548</u>	<u>473</u>	<u>638</u>	<u>654</u>
Fees paid to third parties in respect of Directors' services				
P S Keen	13	13	13	13
G N Vernon		6	13	7
W Plishcke				_2
	<u>13</u>	19	<u>26</u>	<u>22</u>

## (a) Directors' emoluments and compensation

Non-executive

P S Keen
Sir Mark Richmond
G Vernon
Dr K Kurkijarvi
D Turner

(a) Directors emoluments and compensation				
	•	Year ended 3	1 March 20	001
		Benefits		
	Fees	in kind	Bonus	Total
	£'000	£'000	£'000	£'000
Executive				
Professor J Martin	36		_	36
Professor S Ylä-Herttuala (appointed 10 January 2001)	35			35
Dr N Parker	190	1	60	251
M D Williams	<u>127</u>		<u>35</u>	<u>162</u>
	388	1	95	<u>484</u>
Non-executive	===	===	=	
P S Keen	12			12
G Vernon	11			12
Dr K Kurkijarvi	11		_	11
D Turner	7			7
D Tutnet				
	41		=	41
				525
				====
_	9 mont	hs ended 31	December :	2001
		Benefits		_
<del>-</del>	ees	in kind	Bonus	Total
	000	£'000	£'000	£'000
Executive				
	28	_		28
	38		_	38
	35	1	66	202
M D Williams	<u>01</u>	1	<u>40</u>	142
<u>_3</u>	02	2	106	410

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	Year ended 31 December 2002			
	Fees £'000	Benefits in kind £'000	Bonus £'000	Total
Executive				
Professor J Martin	38	_		38
Professor S Ylä-Herttuala	50	_		50
Dr N Parker	189	1	71	261
M D Williams	<u> 194</u>	1		<u>195</u>
	<u>471</u>	<u></u>	<del></del>	<u>544</u>
Non-executive				
P S Keen		_		
Sir Mark Richmond	12		_	12
G Vernon		_		12
Dr K Kurkijarvi	13			13
D Turner	<u>39</u>			
	64			<u>64</u>
				608
	Ye	ar ended 31 I	December 20	003
		Benefits		
	Fees £'000		Bonus £'000	Total £'000
Executive	Fees	Benefits in kind	Bonus	Total
Executive Professor J Martin	Fees	Benefits in kind	Bonus	Total
	Fees £'000	Benefits in kind	Bonus	Total £'000
Professor J Martin	Fees £'000	Benefits in kind	Bonus €'000 —————————————————————————————————	Total £'000  38 50 271
Professor J Martin	Fees £'000 38 50	Benefits in kind £'000	Bonus €'000	Total £'000
Professor J Martin	Fees £'000 38 50 196	Benefits in kind £'000	Bonus €'000 —————————————————————————————————	Total £'000  38 50 271
Professor J Martin	Fees ε'000 38 50 196 148	Benefits in kind £'000   I 1	Bonus €'000 —————————————————————————————————	Total £'000 38 50 271 197
Professor J Martin	Fees ε'000 38 50 196 148	Benefits in kind £'000   I 1	Bonus €'000 —————————————————————————————————	Total £'000 38 50 271 197
Professor J Martin Professor S Ylä-Herttuala Dr N Parker M D Williams  Non-executive P S Keen Sir Mark Richmond	Fees ε'000 38 50 196 148	Benefits in kind £'000   I 1	Bonus €'000 —————————————————————————————————	Total £'000 38 50 271 197
Professor J Martin Professor S Ylä-Herttuala Dr N Parker M D Williams  Non-executive P S Keen Sir Mark Richmond G Vernon	Fees ε'000 38 50 196 148 432 ———————————————————————————————————	Benefits in kind £'000   I 1	Bonus €'000 —————————————————————————————————	38 50 271 197 556
Professor J Martin Professor S Ylä-Herttuala Dr N Parker M D Williams  Non-executive P S Keen Sir Mark Richmond G Vernon Dr K Kurkijarvi	Fees ε'000  38 50 196 148 432 ———————————————————————————————————	Benefits in kind £'000   I 1	Bonus €'000 —————————————————————————————————	38 50 271 197 556
Professor J Martin Professor S Ylä-Herttuala Dr N Parker M D Williams  Non-executive P S Keen Sir Mark Richmond G Vernon	Fees ε'000  38 50 196 148 432 — 12 — 13 41	Benefits in kind £'000   I 1	Bonus €'000 —————————————————————————————————	Total £'000 38 50 271 197 556 ——————————————————————————————————
Professor J Martin Professor S Ylä-Herttuala Dr N Parker M D Williams  Non-executive P S Keen Sir Mark Richmond G Vernon Dr K Kurkijarvi	Fees ε'000  38 50 196 148 432 ———————————————————————————————————	Benefits in kind £'000   I 1	Bonus €'000 —————————————————————————————————	38 50 271 197 556
Professor J Martin Professor S Ylä-Herttuala Dr N Parker M D Williams  Non-executive P S Keen Sir Mark Richmond G Vernon Dr K Kurkijarvi	Fees ε'000  38 50 196 148 432 — 12 — 13 41	Benefits in kind £'000   I 1	Bonus €'000 —————————————————————————————————	Total £'000 38 50 271 197 556 ——————————————————————————————————

# (b) Directors' share options

Aggregate emoluments disclosed above do not include any amounts for the value of options to acquire Ordinary Shares in the Company granted to or held by the Directors.

Details of options for directors who served during the period are as follows:

	Number at 31 March 2001	Granted	Cancelled	Number at 31 December 2001	Exercise Price £	Date from which exercisable	Expiry date
P S Keen		75,000		75,000	1.3800	24/5/01	23/5/2011
Sir Mark Richmond		75,000	******	75,000	1.3800	24/5/01	23/5/2011
Professor J Martin	175,000		_	175,000	0.6000	19/4/2000**	18/4/2010
	25,000		_	25,000	1.0000	25/4/2000**	24/4/2010
		75.000	·	75,000	1.3800	24/5/2001**	23/5/2011
Professor S Ylä-Herttualla	35,000	_	_	35,000	1.0000	19/4/2000**	18/4/2010
Dr N Parker	250,000			250,000	0.0002	*	31/8/2008
	504,404		_	504,404	1.0000	*	24/4/2010
	130,000		_	130,000	0.0002	*	24/3/2010
	-	214,000		214,000	1.3800	25/4/2001**	23/5/2011
M D Williams	150,000	_		150,000	0.6000	*	5/12/2009
	75,000			75,000	1.0000	*	24/4/2010
	75,000		_	75,000	1.0000	25/4/2000**	24/4/2010
		100,000		100,000	1.3800	24/5/2001**	23/5/2011
G Vernon		75,000		75,000	1.3800	24/5/2001	23/5/2011
Dr K Kurkijarvi		75,000	_	75,000	1.3800	24/5/2001	23/5/2011
D Turner	200,000			200,000	1.0000	28/4/2000	5/12/2009
		75,000		75,000	1.3800	24/5/2001	23/5/2011
	100,000		=	100,000	1.0000	25/4/2001	24/4/2010
	1,719,404	764,000		2,483,404			

<sup>\*</sup> Exercisable on trade sale or listing

<sup>\*\*</sup> Exercisable in four equal instalments

	Number at 31 December 2001	Granted	Cancelled	Number at 31 December 2002	Exercise Price £	Date from which exercisable	Expiry date
P S Keen	75,000		(15,000)	60,000	1.3800	24/5/01	23/5/2011
Sir Mark Richmond	75,000	_	(15,000)	60,000	1.3800	24/5/01	23/5/2011
Professor J Martin	175,000	_	_	175,000	0.6000	19/4/2000**	18/4/2010
	25,000		_	25,000	1.0000	25/4/2000**	24/4/2010
	75,000		*****	75,000	1.3800	24/5/2001**	23/5/2011
	_	50,000		50,000	1.4800	21/3/2003**	20/3/2012
Professor S Ylä-Herttualla	35,000			35,000	1.0000	19/4/2000**	18/4/2010
		30,000		30,000	1.4800	21/3/2002**	20/3/2012
Dr N Parker	250,000			250,000	0.0002	*	31/8/2008
	504,404		_	504,404	1.0000	*	24/4/2010
	130,000	_		130,000	0.0002	*	24/4/2010
	214,000	_		214,000	1.3800	24/5/2001**	23/5/2011
		200,000	-	200,000	1.4800	21/3/2002**	20/3/2012
M D Williams	150,000			150,000	0.6000	*	5/12/2009
	75,000	<del></del>		75,000	1.0000	*	24/4/2010
	75,000			75,000	1.0000	25/4/2000**	24/4/2010
	100,000	_		100,000	1.3800	24/5/2001**	23/5/2011
		72,729		72,729	1.4800	21/3/2002**	20/3/2012
		27,271		27,271	1.4800	4/4/2002**	3/4/2012
G Vernon	75,000	_	(15,000)	60,000	1.3800	24/5/2001	23/5/2011
Dr K Kurkijarvi	75,000		(15,000)	60,000	1.3800	24/5/2001	23/5/2011
D Turner	200,000			200,000	1.0000	28/4/2000	5/12/2009
	75,000	_	(15,000)	60,000	1.3800	24/5/2001	23/5/2011
	100,000		(15,000)	85,000	1.0000	24/5/2001	24/4/2010
	2,483,404	380,000	(90,000)	2,773,404			

<sup>\*</sup> Exercisable on trade sale or listing

<sup>\*\*</sup> Exercisable over four years in equal instalments

	Number at 31 December 2002	Granted	Cancelled	Number at 31 December 2003	Exercise Price £	Date from which exercisable	Expiry date
P S Keen	60,000	_		60,000	1.3800	24/5/01	23/5/2011
Sir Mark Richmond	60,000			60,000	1.3800	24/5/01	23/5/2011
Professor J Martin	175,000			175,000	0.6000	19/4/2000**	18/4/2010
	25,000			25,000	1.0000	25/4/2000**	24/4/2010
	75,000			75,000	1.3800	24/5/2001**	23/5/2011
	50,000			50,000	1.4800	21/3/2002**	20/3/2012
		25,000	_	25,000	1.0000	24/9/2003**	23/9/2013
Professor S Ylä-Herttualla	35,000	_		35,000	1.0000	19/4/2000**	18/4/2010
	30,000	_	_	30,000	1.4800	21/3/2002**	20/3/2012
Dr N Parker	250,000	_	_	250,000	0.0002	*	31/8/2008
	504,404			504,404	1.0000	*	24/4/2010
	130,000			130,000	0.0002	*	24/4/2010
	214,000	_		214,000	1.3800	24/5/2001**	23/5/2011
	200,000	_		200,000	1.4800	21/3/2002**	20/3/2012
	_	175,000	_	175,000	1.0000	24/9/2003**	23/9/2013
M D Williams	150,000			150,000	0.6000	*	5/12/2009
	75,000			75,000	1.0000	*	24/4/2010
	75,000	_	_	75,000	1.0000	25/4/2000**	24/4/2010
	100,000		_	100,000	1.3800	24/5/2001**	23/5/2011
	72,729			72,729	1.4800	21/3/2002**	20/3/2012
	27,271	_	_	27,271	1.4800	4/4/2002**	3/4/2012
		90,000		90,000	1.0000	24/9/2003**	23/9/2013
G Vernon	60,000		_	60,000	1.3800	24/5/2001**	23/5/2011
Dr K Kurkijarvi	60,000		_	60,000	1.3800	24/5/2001	23/5/2011
D Turner	200,000			200,000	1.0000	28/4/2000	5/12/2009
	60,000			60,000	1.3800	24/5/2001	23/5/2011
	85,000			85,000	1.0000	25/4/2001	24/4/2010
	2,773,404	315,000		3.088,404			

<sup>\*</sup> Exercisable on trade sale or listing

As part of the corporate restructuring, during the year ended 31 December 2002, holders of options under the employee share option plans operated by Ark Therapeutics Limited were offered the opportunity to exchange their options over shares in Ark Therapeutics Group plc.

P S Keen holds his options on trust for Merlin General Partner Limited, as general partner of the Merlin Fund L.P. Professor S Yla-Herttuala and Dr K Kurkijarvi retained options over shares in Ark Therapeutics Limited, but, under an agreement dated 12 July 2002 between Ark Therapeutics Limited, Ark Therapeutics Group Limited and the individuals, on any exercise of options the Ark Therapeutics Limited shares subject to option shall be issued directly to Ark Therapeutics Group Limited and Ark Therapeutics Group Limited shall issue the equivalent number of its shares to the individual.

# (c) Directors' pension contributions

Two Directors are members of money purchase schemes (31 December 2002 - 2; 31 December 2001 - 2; 31 March 2001 - 2). Contributions paid by the Group in respect of such Directors are set out in the table below:

	Year ended 31 March 2001	9 months ended 31 December 2001	Year ended 31 December 2002	Year ended 31 December 2003
	£'000	£,000	£'000	£'000
Directors' pension contributions				
Dr N Parker	12	9	16	18
M D Williams	<u>11</u>	<u>10</u>	14	<u>14</u>
	<u>23</u>	<u>19</u>	<u>30</u>	<u>32</u>

<sup>\*\*</sup> Exercisable over four years in equal instalments

# (d) Directors' shareholdings

The Directors held beneficial interests in the shares of the Company as follows:

December 2001	31 December 2002	31 December 2003
umber	Number	Number
320,000	362,734	362,734
216,179	2,216,179	2,216,179
13,514	13,514	13,514
10,135	20,135	20,135
13,518	13,518	13,518
	<del>_</del>	_
40,541	40,541	40,541
<del></del>		
	50,000	50,000
	2001 umber 220,000 16,179 13,514 10,135	2001 2002 umber Number  120,000 362,734 116,179 2,216,179 13,514 13,514 10,135 20,135

Interests in the ordinary shares listed in respect of Dr Nigel Parker are held by Brecon Holdings Limited on trust for members of his immediate family. The interests of Dr G N Vernon are held by Ziggus Holdings Limited.

All interests in shares at 31 December 2001 were in the shares of Ark Therapeutics Limited. Under the share for share reorganisation of 24 April 2002 shares in Ark Therapeutics Limited were exchanged for an equivalent number of shares in Ark Therapeutics Group plc.

# 7. TAXATION

	Year ended 31 March 2001	9 months ended 31 December 2001	Year ended 31 December 2002	Year ended 31 December 2003
	£'000	£'000	£'000	£'000
The tax charge (credit) comprises:				
Foreign tax	1			(1)
Current tax				
Research and development tax credit	<del></del>		(645)	(650)
Adjustments in respect of prior periods:				
R&D tax credit — 9m ended 31/12/01			(388)	
R&D tax credit — year ended 31/12/02			(366)	
Total current tax	_1		(1,399)	<u>(651</u> )
Deferred tax				
Total tax on loss on ordinary activities	1		(1,399)	<u>(651</u> )

The standard rate of tax for the year based on the UK standard rate of corporation tax is 30 per cent. The actual tax charge (credit) for the current and previous periods differs from the standard rate for the reasons set out in the following reconciliation:

	Year ended 31 March 2001 £'000	9 months ended 31 December 2001 £'000	Year ended 31 December 2002 £'000	Year ended 31 December 2003 £'000
Loss on ordinary activities before tax	(3,005)	(8,613)	<u>(7,122</u> )	(8,752)
Tax at 30 per cent. thereon	(902)	(2,584)	(2,136)	(2,625)
Expenses not deductible for tax purposes		21	270	5
Share-based compensation		1,098	(346)	(178)
Capital allowances in deficit of depreciation	5		8	6
Movement in short-term timing differences	29	(3)	(38)	15
Goodwill amortisation	78	282	376	376
Other deferred tax movements		4		-
Overseas losses not recognised		18		
R&D tax credit not recognised	366	388	_	
UK losses not recognised	321	783	1,136	1,767
Differences in rate for R&D relief		(7)	83	(17)
Differences in respect of prior periods	60		(752)	_
Overseas tax charge	(1)			
Other movements	45			
Current tax charge (credit) for the period			(1,399)	(651)

# Analysis of deferred tax balances:

The Group had unprovided deferred tax balances as follows:

	Year ended 31 March 2001	9 months ended 31 December 2001	Year ended 31 December 2002	Year ended 31 December 2003
	£,000	£'000	£'000	£'000
Timing differences	(41)	(43)	(7)	
Accelerated capital allowances	11	16	. 9	6
Tax losses available	<u>(1,531</u> )	(3,429)	<u>(4,221)</u>	(5,899)
Total unprovided deferred tax	<u>(1,561</u> )	(3,456)	<u>(4,219)</u>	(5,893)

There were no provided deferred tax balances as at 31 December 2003 or in previous years.

The Company has tax losses available to carry forward against future taxable profits, subject to agreement with the Inland Revenue.

No deferred tax asset has been recognised in respect of timing differences relating primarily to tax losses as there is insufficient evidence that the asset would be recoverable. The asset will be recoverable when the Group generates sufficient taxable profits.

# 8. LOSS PER ORDINARY SHARE

The calculations of earnings per share are based on the following losses and numbers of shares.

	Basic and diluted				
	Year ended 31/3/01	9 months ended 31/12/01	Year ended 31/12/02	Year ended 31/12/03	
Retained loss for the financial period $(£'000)$	3,006	8,613	5,723	8,101	
Weighted average number of ordinary shares for loss per share	48,526,835	69,764,724	81,106,688	81,106,688	

The loss per share is based on the weighted average number of shares adjusted to reflect the restructuring of share capital on listing of the Company (see note 25) and is presented as if the share restructuring had happened at the beginning of the period under review.)

FRS 14 requires presentation of diluted earning per share when a company could be called upon to issue shares that would decrease net profit or increase net loss per share. For a loss making company with outstanding share options, net loss per share would only be increased by the exercise of out-of-the-money options. Since it seems inappropriate to assume that option holders would exercise out-of-the-money options, no adjustment has been made to diluted loss per share for out-of-the-money share options.

## 9. INTANGIBLE ASSETS

	Goodwill £'000
Cost	
At 31 December 2001, 31 December 2002 and 31 December 2003	5,015
Amortisation	
At 31 December 2001	1,201
Charge for the year	1,254
At 31 December 2002	2,455
Charge for the year	1,254
At 31 December 2003	3,709
Net book value	
At 31 December 2001	3,814
At 31 December 2002	2,560
At 31 December 2003	1,306

Goodwill is being amortised over its useful economic life, which is considered to be four years.

# 10. TANGIBLE ASSETS

	Leasehold improvements £'000	Laboratory equipment £'000	Office equipment £'000	Total
Cost				
At 31 December 2001		209	91	300
Additions	254	280	48	582
Exchange adjustment		6	1	7
At 31 December 2002	254	495	140	889
Additions	83	90	84	257
Disposals			(6)	(6)
Exchange adjustment	_21	<u>_36</u>	3	60
At 31 December 2003	358	<u>621</u>	<u>221</u>	1,200
Depreciation				
At 31 December 2001		83	37	120
Charge for the year		56	30	86
Exchange adjustment		1		1
At 31 December 2002		140	67	207
Charge for the period	40	76	40	156
Disposals			(6)	(6)
Exchange adjustment		7	1	8
At 31 December 2003	40	223	102	<u>365</u>
Net book value				
At 31 December 2001		<u>126</u>	_54	180
At 31 December 2002	254	355	<u>73</u>	682
At 31 December 2003	<u>317</u>	398	119	835

The net book value of leased assets included above was £nil (£11,338, £14,474 and £nil as at 31 December 2002, 31 December 2001 and 31 March 2001 respectively).

## 11. INVESTMENTS

The subsidiary undertakings of the Company as at 31 December 2003 were as detailed below:

Name of subsidiary	Country of incorporation	Ordinary shares ownership interest
Ark Therapeutics Limited	England	100
Ark Therapeutics Oy	Finland	100
KerraTec Inc	USA	100

The principal activity of each of the companies above is the discovery, development and commercialisation of products in the areas of specialist medicine.

The investment in Ark Therapeutics Oy is held by Ark Therapeutics Limited.

# Acquisition of subsidiary undertakings

On 10 January 2001, the Company acquired 100 per cent. of the issued share capital of Ark Therapeutics Oy (formerly Oy Quattrogene Limited) for consideration comprising 3,625,168 ordinary shares of 0.02p each in the Company. Of these shares, 2,425,168 were issued on 10 January 2001 and 1,200,000 were issued on 22 May 2001. The fair value of the total consideration was £5,000,000. In accordance with sections 131 and 133 of the Companies Act 1985, the Company has taken no account of any premium on the shares issued and has recorded the cost of the investment at the nominal value of the shares issued. The resulting difference arising on consolidation has been credited to merger reserve.

Ark Therapeutics Group plc acquired 100 per cent. of the issued share capital of Ark Therapeutics Limited on 24 April 2002 in exchange for the issue of ordinary shares of 0.02p each in Ark Therapeutics Group plc Limited on a one-for-one basis. In accordance with sections 131 and 133 of the Companies Act 1985, the Company has taken no account of any premium on the shares issued and has recorded the cost of the investment at the nominal value of the shares issued. The resulting difference on consolidation has been recorded within the merger reserve.

On 23 December 2003, KerraTec Inc. was incorporated in Delaware, USA and 85,000 ordinary shares of \$0.01 each in that company were acquired by the Company.

## 12. STOCKS

As at 31 December 2003, the Group held stocks of finished goods of £9,200 (£nil as at 31 December 2002 and 31 December 2001).

# 13. DEBTORS

	At 31 December		
	2001	2002	2003
	£'000	£,000	£,000
Amounts falling due within one year:			
VAT	72	246	114
Prepayments and accrued income	86	119	203
R&D tax credits receivable		1,033	650
Other debtors	8	50	51
	166	1,448	1,018
Amount falling due after more than one year:			
Other debtors	<u>17</u>	11	
	183	1,459	1,018

#### 14. CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR

	At 31 December		
	2001	001 2002	2003
	£,000	£'000	£'000
Other loans	3	11	48
Finance leases	6	6	
Trade creditors	112	434	171
Taxation and social security	37	63	57
Accruals and deferred income	1,607	1,710	2,295
Other creditors	15	21	12
	1,780	2,245	2,583

# 15. CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR

	At 31 December		
	2001	2002	2003
	£'000	£'000	£'000
Finance leases	6	_	_
Other loans	113	_382	<u>487</u>
	119	382	487
Borrowings are repayable as follows:			
Finance leases			
In one year or less	6	6	
In more than one year but not more than two years	6		-,
In more than two years but not more than five years			
	12	6	
Other loans			
In more than one year but not more than two years	11	96	88
In more than two years but not more than five years	55	191	298
After five years	<u>47</u>	95	101
	113	382	487
On demand or within one year	3	11	48
	116	393	535

In January 1998, the Company's wholly owned subsidiary, Ark Therapeutics Oy ("ATO"), entered into an eight year term loan with Finnish Government Agency TEKES. The loan is repayable in instalments beginning in January 2002 (or later if such repayments would leave ATO with insufficient distributable funds) and has an interest rate of 1 per cent. below Finnish Bank base rate, with a minimum rate of 3 per cent. In total, 74,447 Euros were borrowed (out of an available facility of 134,550 Euros).

In February 2000, ATO entered into a second eight year term loan with TEKES. The loan is repayable in instalments beginning in February 2004 (or later if such repayments would leave ATO with insufficient distributable funds) and has an interest rate of 1 per cent. below Finnish Bank base rate, with minimum rate of 3 per cent. In total 155,237 Euros were borrowed (out of an available facility of 181,643 Euros).

In March 2002, ATO entered into a seven year term loan with Finnish Government Agency FINNVERA. The loan is repayable in instalments beginning in September 2003. The loan has an interest rate of Euribor 6 plus 2.27 per cent. In total, 370,013 Euros were borrowed (out of an available facility of 370,013 Euros). Ark Therapeutics Limited has given a guarantee to FINNVERA as a security for the loan. In addition, ATO has pledged floating charges amounting to 370,000 Euros to FINNVERA.

In December 2002 ATO entered into an eight year term loan with TEKES. The loan is repayable in instalments beginning in 2007 and has an interest rate of 3 per cent. below Finnish Bank base rate, with a minimum rate of 1 per cent. In total, 191,024 Euros were borrowed (out of an available facility of 238,780 Euros).

#### 16. CALLED-UP SHARE CAPITAL

Authorised share capital:

	At 31 December		
	2001	2002	2003
	£'000	£'000	£,000
4,975,210,397 (2002 — 4,975,210,397, 2001 — 28,095,500) ordinary			
shares of 0.02p each	6	995	995
15,032,846 (2002 — 15,032,846, 2001 — 15,032,846) A ordinary shares			
of 0.02p each	3	3	3
9,756,757 (2002 — 9,756,757, 2001 — 12,500,000) B ordinary shares of			
0.02p each	3	2	2
50,000 (2002 — 50,000, 2001 — nil) preference shares of £1 each		50	50
	. 12	1,050	1,050

Allotted, called-up and fully paid

	At 31 December		
	2001	2002	2003
	£'000	£'000	£,000
13,968,498 ordinary shares of 0.02p each	3	3	3
15,032,846 A ordinary shares of 0.02p each	3	3	3
9.756,757 B ordinary shares of 0.02p each	2	2	2
50,000 preference shares of £1 each		50	50
	8	58	58

The share information above relates to Ark Therapeutics Limited as at 31 December 2001 and the Company as at 31 December 2002 and 31 December 2003.

On 13 August 2001, the Company raised £14.4 million, gross of expenses, through the issue of 9,756,757 new B ordinary shares to a group of investors. Shares issued in respect of further acquisitions are further described in note 11.

On 24 April 2002, Ark Therapeutics Group plc acquired 100 per cent. of the share capital of Ark Therapeutics Limited in a share for share exchange with the shareholders of Ark Therapeutics Limited. The shares in Ark Therapeutics Group plc Limited were issued and allotted to the shareholders in the same classes and in the same proportion as the shares in Ark Therapeutics Limited at that time, credited as fully paid.

At an extraordinary general meeting on 17 April 2002, shareholders voted to create 50,000 non-voting redeemable preference shares of £1 each. On 25 April 2002, 50,000 redeemable preference shares were allotted to Mr M D Williams following receipt of an irrevocable and unconditional undertaking by M D Williams to pay £1 in cash in subscription for each of the shares.

# Conversion

Upon a listing or sale of the Company all of the A or B ordinary shares convert into ordinary shares. The number of ordinary shares issued for each A or B ordinary share redeemed will be based on the A or B conversion rate immediately prior to the listing.

# Income priority

Subject to the rights of the non-voting redeemable preference shares as set out below, any profits determined by the Company to be distributed will be applied thereafter in paying a dividend to the holders of A and B ordinary shares. This convertible distribution amount will be distributed amongst the holders of A ordinary shares and B ordinary shares (*pari passu* as if the same constituted one class of share) according to the number of ordinary shares deemed to be held by the Shareholders.

# Capital priority

Subject to the rights of the non-voting redeemable preference shares as set out below, holders of A ordinary shares and B ordinary shares rank ahead of the holders of ordinary shares upon any winding-up or other return of capital of the Company. The A ordinary shares and B ordinary shares rank equally in this regard.

# Change of control

If a Group of Shareholders between them representing a controlling interest in the issued equity share capital of the Company accept an offer to sell their shares to a third party, the remaining Shareholders will be bound to also accept the offer.

#### Preference shares

The terms of the redeemable preference shares have a number of rights and restrictions as set out below:

#### Income

Holders of preference shares will not have the right to participate in any profits of the Company available for distribution at any time prior to December 2003. Thereafter, holders of preference shares will have the right to receive a fixed cumulative preferential dividend at the rate of 0.1 per cent. per annum on the paid-up issued shares, such shares ranking for dividend in priority to all other shares in issue.

## Capital

On a winding-up or other return of capital, holders of preference shares have the right to receive repayment in full of the paid-up capital plus any arrears of the preferential dividend, such returns of capital ranking in priority to all other shares.

# Redemption

The preference shares will be redeemed conditional on or simultaneous with the admission of the Company's ordinary share capital to the Official List of the UK Listing Authority or, if earlier, on 31 December 2005. The Company may, at its option, redeem all or any of the preference shares at any time prior to this.

# Voting

Holders of the preference shares will not be entitled to vote at general meetings of the Company unless at the date of any notice convening the meeting any redemption monies or preferential dividend are at least three months in arrears.

The following options over 0.02p ordinary shares of the Company have been granted and were outstanding at the end of each financial period:

Grant date	Exercise price per share	Exercise period	Year ended 31 March 2001	9 months ended 31 December 2001	Year ended 31 December 2002	Year ended 31 December 2003
			Number	Number	Number	Number
September 1998	0.0002	(1)	250,000	250,000	250,000	250,000
November 1998	0.6000	(2)	37,500	37,500	37,500	37,500
November 1999	0.6000	(3)	100,000	100,000	100,000	100,000
December 1999	1.0000	(4)	200,000	200,000	200,000	200,000
December 1999	0.6000	(5)	150,000	150,000	150,000	150,000
April 2000	0.6000	(6)	175,000	175,000	175,000	175,000
April 2000	0.0002	(7)	130,000	130,000	130,000	130,000
April 2000	1.0000	(7)	579,404	579,404	579,404	579,404
April 2000	1.0000	(8)	418,500	413,500	413,500	401,000
May 2001	1.3800	(9)		1,046,000	956,000	946,000
July 2001	1.3800	(10)		22,500	22,500	22,500
November 2001	1.4800	(11)		25,000	25,000	25,000
March 2002	1.4800	(12)			468,640	468,640
April 2002	1.4800	(13)			221,360	183,860
August 2002	1.4800	(14)		_		25,000
September 2003	1.0000	(15)				687,500
			2,040,404	3,128,904	3,728,904	4,381,404

- (1) Exerciseable on trade sale or listing on recognised stock exchange through to 30 September 2008.
- (2) Exerciseable from 23 November 2001 to 22 November 2008.
- (3) Exerciseable from 1 November 2002 to 31 October 2009.
- (4) Exerciseable from 28 April 2000 to 5 December 2009.
- (5) Exerciseable on trade sale or listing on recognised stock exchange through to 5 December 2009.
- (6) Exerciseable in four instalments from 19 April 2004 to 18 April 2010.
- (7) Exerciseable on trade sale or listing on recognised stock exchange through to 24 April 2010.
- (8) Exerciseable in four instalments from 25 April 2000 to 24 April 2010.
- (9) Exerciseable in four instalments from 24 May 2001 to 23 May 2011.
- (10) Exercisable in four instalments from 4 July 2001 to 3 July 2011.
- (11) Exercisable in four instalments from 20 November 2001 to 19 November 2011.
- (12) Exercisable in four instalments from 21 March 2002 to 20 March 2012.
- (13) Exercisable in four instalments from 4 April 2002 to 3 April 2012.
- (14) Exercisable in four instalments from 31 August 2002 to 30 August 2012.
- (15) Exercisable in four instalments from 24 September 2003 to 23 September 2013.

By an agreement dated 6 December 1999, Ark Therapeutics Limited agreed with M D Williams to grant, as an incentive to achieving an initial public offering and for nil consideration, an option over a variable number of ordinary shares, not exceeding 320,000 in number, depending on the valuation of Ark Therapeutics Limited immediately before listing on a recognised stock exchange. The exercise price of each option will be £0.60 per ordinary share.

By an agreement dated 31 July 1998, Ark Therapeutics Limited agreed with Dr N R Parker to grant, as an incentive to achieving an initial public offering and for nil consideration, an option over a variable number of ordinary shares, not exceeding 3 per cent. of the issued ordinary share capital (as increased by the placing) of Ark Therapeutics Limited at an exercise price of £0.60.

Both options were exercisable from listing on a recognised stock exchange, M D Williams' until 5 December 2009, and Dr N R Parker's until 30 July 2008. However, on 7 August 2003 M D Williams and Dr N R Parker waived their right to these options.

#### 17. RESERVES

	Merger reserve £'000	Profit and loss account £'000	Total £'000
At 31 March 2001	22,681	(7,246)	15,435
Retained loss for the year		(8,613)	(8,613)
Share-based compensation		3,661	3,661
Currency translation differences on foreign currency net investment		(1)	(1)
New shares issued by Ark Therapeutics Limited	14,308		14,308
Expenses of share issue	(132)		(132)
At 31 December 2001	36,989	(12,199)	24,790
Retained loss for the year		(5,723)	(5,723)
Share-based compensation		(1,156)	(1,156)
Currency translation differences on foreign currency net investment		<u>(6</u> )	(6)
At 31 December 2002	36,989	(19,084)	17,905
Retained loss for the year	_	(8,101)	(8,101)
Share-based compensation		(594)	(594)
Currency translation differences on foreign currency net investment		(12)	(12)
At 31 December 2003	36,989	<u>(27,791</u> )	<u>(9,198)</u>

Merger accounting principles have been applied in respect of the corporate restructuring described in the accounting policies section. Accordingly, Ark Therapeutics Group plc has taken no account of any premium on the shares issued in respect of the restructuring and the resulting difference arising on consolidation has been credited to a merger reserve.

## 18. RECONCILIATION OF MOVEMENTS IN SHAREHOLDERS' FUNDS

	At 31 December			
	2001	2002	2003	
	£'000	£,000	£'000	
Loss for the period	(8,613)	(5,723)	(8,101)	
Share-based compensation	3,661	(1,156)	(594)	
Other gains and losses relating to the period	(1)	(6)	(12)	
New shares issued (net)	14,310	50		
	9,357	(6,835)	(8,707)	
Opening Shareholders' funds	15,441	24,798	17,963	
Closing Shareholders' funds	24,798	<u>17,963</u>	9,256	

# 19. DERIVATIVES AND OTHER FINANCIAL INSTRUMENTS

The Group's financial instruments comprise cash and short-term deposits, debtors and creditors, which arise in the normal course of business. It is, and has been throughout the period under review, the Group's policy that no speculative trading in financial instruments shall be undertaken.

The main risks arising from the Group's financial instruments are interest rate risk, liquidity risk and currency risk.

This note deals with financial assets and financial liabilities as defined in Financial Reporting Standard 13 "Derivatives and other financial instruments: Disclosures" ("FRS 13"). For this purpose, non-equity shares issued by the Company are dealt with in the disclosures in the same way as the Group's financial liabilities but separately disclosed. Certain financial assets such as investments in subsidiary undertakings are excluded from the scope of these disclosures.

As permitted by FRS 13, short-term debtors and creditors have also been excluded from the disclosures, other than the currency disclosures.

## Interest rate risk and liquidity risk

The Group is principally funded with equity and invests its funds in short-term bank deposits. Since 31 March 2001, the Group has had access to these deposits at a maximum of 24 hours' notice.

The Group's policy throughout the periods presented has been to minimise the risk by placing funds in low risk cash deposits but to also maximise the return on funds placed on deposit. Limits are set by the Board and reviewed when deemed necessary.

## Interest rate profile

The Group has no financial assets other than sterling cash deposits of £8,917,766 at 31 December 2003 (£15,731,833 at 31 December 2002, £22,173,961 at 31 December 2001 and £11,346,034 at 31 March 2001) which are part of the financing arrangements of the Group. All cash deposits are all available at a maximum of 24 hours' notice. The benchmark rate for determining interest receivable on floating rate assets is linked to the base rate of the relevant country.

The interest rate profile of the Group's financial liabilities were as follows:

Functional currency of Group operation	Total	Floating rate	Fixed rate	Interest Free
Sterling				
— borrowings		_		
— non-equity shares	. 50	_		50
Euro				
— loans	. <u>534</u>	<u>534</u>		
At 31 December 2003	. <u>584</u>	<u>534</u>	=	
	Total	Floating rate	Fixed rate	Interest Free
	£'000	£'000	£'000	£'000
Sterling				
— borrowings	6		6	
— non-equity shares	50			50
Euro	525	<b>525</b>		
— loans	535	<u>535</u>		
At 31 December 2002	585	<u>535</u>	<u>=6</u>	
	Total	Floating rate	Fixed rate	Interest Free
	£'000	£,000	£'000	£'000
Sterling				
- borrowings	12		12	
non-equity shares				
Euro				
— loans	116	<u>116</u>		
At 31 December 2001	128	<u>116</u>	<u>12</u>	====

There were no fixed rate borrowings as at 31 December 2003. At 31 December 2002, sterling fixed rate borrowings totalled £6,000 on finance leases at 16.9 per cent. interest for the remaining ten months. At 31 December 2001, sterling fixed rate borrowings totalled £12,000 on finance leases at 16.9 per cent. interest for the remaining 22 months. There were no non-sterling fixed rate borrowings at any of these periods.

The only interest-free liabilities are the £50,000 of redeemable preference shares (2002 — £50,000, 2001 — £nil). These are repayable at any time at the option of the Company.

The interest rate on floating rate financial liabilities is linked to Euribor in the case of Euro liabilities.

Further details of interest rates on long-term borrowings are given in note 15. The Group had undrawn committed borrowing facilities at 31 December 2003, in respect of which all conditions precedent had been met, of £94,771 expiring in more than two years (2002 — £259,822 expiring in more than two years, 2001 — £52,820 expiring in more than two years).

## Currency exposures

Following the acquisition of Ark Therapeutics Oy on 10 January 2001, the Group's objective in managing the currency exposures arising from its net investment overseas (in other words, its structural currency exposures) is to maintain a broadly equivalent revenue and expense stream in local currency. The residual structural risk, which results from movements in the Group's overseas subsidiary is unhedged as the Board does not believe that the benefits would outweigh the costs due to the size of operation. Gains and losses arising from these structural currency exposures are recognised in the statement of total recognised gains and losses.

The table below shows the Group's currency exposures; in other words, those transactional (or non-structural) exposures that give rise to the net currency gains and losses recognised in the profit and loss account. Such exposures comprise the monetary assets and monetary liabilities of the Group that are not denominated in the operating (or "functional") currency of the operating unit involved.

	Net foreign currency monetary assets (liabilities)			
Functional currency of Group operation	US Dollar	Sterling	Euro	Total
	£'000	£'000	£'000	£'000
Sterling	160		20	180
US dollar		100		100
At 31 December 2003	<u>160</u>	100	<u>20</u>	<u>280</u>
	Net foreign o	currency monet	ary assets (li	abilities)
	US Dollar	Sterling	Euro	Total
	£'000	£'000	£'000	£'000
Sterling	158		61	219
US dollar				
At 31 December 2002	158		61	219
		===		
	Net foreign o	urrency monet	ary assets (li	abilities)
	US Dollar	Sterling	Euro	Total
	£,000	£'000	£'000	£,000
Sterling	144		110	254
US dollar				
At 31 December 2001	144		110	254

As at 31 December 2003 the Group also held open a foreign currency forward contract that the Group had taken out to hedge certain expected future foreign currency costs. At 31 December 2003 the Group had a firm commitment to purchase \$1,000,000 at a fixed rate of \$1.607 to one pound (2002 £nil, 2001 £nil).

# Maturity of financial liabilities

The Group's financial liabilities comprise loans, finance lease creditors and non-equity shares, totalling £585,000 at 31 December 2003 (£449,000, £128,000 at 31 December 2002 and 31 December 2001 respectively). These are further analysed below:

	2003	2002	2001
	£'000	£,000	£'000
In one year or less	98	67	9
In more than one year but not more than two years	88	96	17
In more than two years but not more than five years	298	191	55
In more than five years	<u>101</u>	95	<u>46</u>
	<u>585</u>	<u>449</u>	<u>128</u>

Included in amounts falling due in one year or less as at 31 December 2003 was £50,000 in respect of non-equity shares (31 December 2002 — £50,000, 31 December 2001 — £nil).

# Fair values

The directors consider there to be no material difference between the book value of financial instruments and their fair value at the balance sheet dates.

# Market price risk

The principal market price risk comprises interest rate exposure. Group funds are invested in money market cash deposits with the objective of maintaining a balance between accessibility of funds and competitive rates of return.

# 20. RECONCILIATION OF OPERATING LOSS TO OPERATING CASH FLOWS

	Year ended 31 March 2001 £'000	Nine months ended 31 December 2001	Year ended 31 December 2002 £'000	Year ended 31 December 2003 £'000
Omerating loss				
Operating loss	(3,717)	(9,297)	(7,886)	(9,209)
Depreciation charge	34	33	86	156
Amortisation of goodwill	261	940	1,254	1,254
(Increase) decrease in debtors	(29)	(28)	(192)	68
(Increase) decrease in stocks				(9)
Increase (decrease) in creditors	623	380	460	220
Stock compensation charge		3,661	<u>(1,156)</u>	_(594)
Net cash outflow from operating activities	<u>(2,828)</u>	<u>(4,311)</u>	<u>(7,434)</u>	<u>(8,114)</u>

# 21. ANALYSIS OF CASH FLOWS

	Year ended 31 March 2001 £'000	Nine months ended 31 December  2001 £'000	Year ended 31 December 2002 £'000	Year ended 31 December 2003 £'000
Returns on investments and servicing of finance	2 000		2 000	~ 000
Interest received	721	686	765	458
Net cash inflow	721	686	765	458
Taxation			266	1.024
Research & development tax credit			366	1,034
Net cash inflow			366	1,034
Capital expenditure and financial investment Purchase of tangible fixed assets	(21)	(121)	(582)	(257)
Net cash outflow	(21)	(121)	<u>(582</u> )	(257)
Acquisitions Expenses of acquisition of subsidiary undertaking Net cash acquired with subsidiary undertaking Net cash outflow	(85) 			
Management of liquid resources  Cash (placed on) withdrawn from term deposits	(1,000)	1,000		
Financing				
Issue of ordinary share capital	13,969	14,309		_
Capital element of finance lease rental payments			(6)	(6)
Repayment of loans		<del></del>	<del>-</del>	(34)
Increase in short-term borrowings	19	10	<u>260</u>	
Net cash inflow	13,988	14,319	<u>254</u>	<u>169</u>

# 22. ANALYSIS AND RECONCILIATION OF NET FUNDS

	31 March 2001 £'000	Cash flow	Other non- cash changes £'000	Exchange movement £'000	31 December 2001 £'000
Cash at bank and in hand	10,947	11,573			22,520
Current asset investments	1,000	(1,000)			
Debt due within one year	(3)	(6)			(3)
Debt due after more than one year	(102)	(11)			(113)
Finance leases			<u>(12</u> )		(12)
Net funds	11,842	10,562	<u>(12)</u>		22,392
	44.5				

	31 December 2001	Cash flow	Other non- cash changes	Exchange movement	31 December 2002
	£'000	£'000	£'000	£'000	£'000
Cash at bank and in hand	22,520	(6,631)			15,889
Current asset investments	_				
Debt due within one year	(3)		(8)		(11)
Debt due after more than one year	(113)	(260)	(9)		(382)
Finance leases	(12)	6			(6)
Net funds	22,392	<u>(6,885)</u>	<u>(17)</u>		15,490

	31 Dec 200 £'0	02	Cash flo	Other no cash char £'000	nges movemen	
Cash at bank and in hand	15,8	389	(6,710	)) —	(21)	9,158
Current asset investments	•		` -		<u></u>	_
Debt due within one year	1	(11)	(38	3) —	1	(48)
Debt due after more than one year	(3	382)	(137	') —	32	(487)
Finance leases		(6)				
Net funds	15,4	90	(6,879	<u> </u>		8,623
		Yea ende 31 Ma 200 £'00	ed rch 3	9 months ended 1 December 2001 £'000	Year ended 31 December 2002 £'000	Year ended 31 December 2003
Increase (decrease) in cash in the period		10,8	53	11,573	(6,631)	(6,710)
Cash outflow from decrease in debt		(	19)	(11)	(269)	(175)
Cash outflow from decrease in lease fina Cash outflow (inflow) from increase	uncing	-		<del></del>	6	6
(decrease) in liquid resources		1,0	<u> </u>	(1,000)		
Change in net funds resulting from cash	flows	11,8	34	10,562	(6,894)	(6,879)
Loans acquired with subsidiary  New finance leases (net)		(	86)	_	_	

522

10,550

11,842

22,392

(6,902)

22,392

12,270

11,842

(428)

12

(6,867)

15.490

8,623

## 23. FINANCIAL COMMITMENTS

Translation difference

Movement in net funds in year .....

Net (debt) funds at beginning of year . . . . . .

Annual commitments under non-cancellable operating leases are as follows:

	As at 31 December					
	2001		2002		2003	3
	Land and buildings	Other £'000	Land and buildings	Other £'000	Land and buildings	Other £'000
Group Expiry date						
— within one year					20	1
— between two and five years	_75	3	<u>130</u>	3	214	11
	<u>75</u>	3	130	3	234	<u>12</u>

The Group had no capital commitments outstanding at 31 December 2003 (31 December 2002: nil; 31 December 2001: nil; 31 March 2001: nil).

# 24. RELATED PARTY TRANSACTIONS

The following transactions took place during the reported periods at arm's length:

Professor J F Martin and Professor S Ylä-Herttuala, both Shareholders and Directors of the Company and Group companies during the year, charged consultancy fees of £36,000 (£34,200, £28,125, £36,125 for the periods ended 31 December 2002, 31 December 2001 and 31 March 2001 respectively) and £48,500 (£48,500, £36,378, £35,416 for the periods ended 31 December 2002, 31 December 2001 and 31 March 2001 respectively). These fees were not in respect of services as Directors. At 31 December 2003, £48,484 (£38,636, £36,971, £14,004 as at 31 December 2002, 31 December 2001 and 31 March 2001 respectively) was owed to Professor S Ylä-Herttuala, and £3,000 (£3,125, £4,425, £3,125 as at 31 December 2002, 31 December 2001 and 31 March 2001 respectively) was owed to Professor J F Martin.

Merlin Ventures Limited, the 100 per cent. owner of Merlin Equity Limited, a Shareholder of the Company, recharged expenses incurred on behalf of the Company of £528 (£99, £94, £1,990 for the periods ended 31 December 2002, 31 December 2001 and 31 March 2001 respectively) at cost and Director's fees for the services of P S Keen of £12,500 (£12,500, £9,378, £12,500 for the periods ended 31 December 2002, 31 December 2001 and 31 March 2001 respectively). At 31 December 2003 £6,252 (£3,126, £nil, as at 31 December 2002, 31 December 2001 and 31 March 2001 respectively) was owed to Merlin Ventures Limited. Peter Keen resigned as a director of Merlin Ventures Limited on 26 February 2003, but remains a director of Merlin Equity Limited.

Nomura International plc, a Shareholder of the Company, recharged expenses incurred on behalf of the Company of £nil (£15,371, £68,936, £nil for the periods ended 31 December 2002, 31 December 2001 and 31 March 2001 respectively) and Director's fees for the services of Dr G N Vernon of £7,294 (£12,500, £9,378, £12,500 for the periods ended 31 December 2002, 31 December 2001 and 31 March 2001 respectively). The Company also paid professional fees to Nomura International plc of £nil (£5,842, £8,390, £nil for the periods ended 31 December 2002, 31 December 2001 and 31 March 2001 respectively). At 31 December 2003, £2,084 (£8,344, £8,340, £nil as at 31 December 2002, 31 December 2001 and 31 March 2001 respectively) was owed to Nomura International plc.

University College London has a controlling interest in UCL Cruciform Limited, a Shareholder of the Company. £177,220 (£189,868, £55,591, £372,220 for the periods ended 31 December 2002, 31 December 2001 and 31 March 2001 respectively) was charged by University College London for services provided under collaboration agreements with the Company. Additionally, £45,858 (£100,858, £nil, £nil for the periods ended 31 December 2002, 31 December 2001 and 31 March 2001 respectively) was paid to the University as grants. At the year end £113,821 (£243,917, £253,291, £164,695 as at 31 December 2002, 31 December 2001 and 31 March 2001 respectively) was outstanding.

Until 31 January 2002, Sir Mark Richmond (a Director of the Company) was an employee of University College London, which is a Shareholder of the Company, and which charged Director's fees in the year ended 31 December 2002 of £1,042 (£9,378, £12,500 for the periods ended 31 December 2001 and 31 March 2001 respectively) for his services.

## 25. POST BALANCE SHEET EVENTS

On 16 January 2004, by a special resolution passed by the shareholders of the Company, the issued share capital of the Company was increased to £58,086 by the creation of 175,000 ordinary shares, 1,250,000 non-convertible C ordinary shares of 0.02 pence each and 250,000 non-convertible D ordinary shares of 0.02 pence each, each having the rights and being subject to the restrictions and obligations set out in the articles of association.

The non-convertible C ordinary shares and the non-convertible D ordinary shares, were issued to a Family Benefit Trust in respect of Nigel Parker and Martyn Williams respectively and will, conditional upon and simultaneously with Admission, be redeemed by the Company and in their place a number of New Ordinary Shares will be issued to the Family Benefit trust.

Under a special resolution passed on 24 February 2004, simultaneously upon Listing, each A ordinary share in issue at that time will be converted into one ordinary share of 0.02 pence each and each B ordinary share will be converted into ordinary shares of 0.02 pence each (on the basis of 1.184 ordinary shares for every B ordinary share, and for which purpose the Directors may capitalise such sum as may be necessary by paying up in full unissued ordinary shares of 0.02 pence each). Immediately following this conversion, there will be a bonus issue of 99 ordinary shares of 0.02 pence each for each ordinary share of 0.02 pence each. Thereafter, there will be a consolidation on the basis of one ordinary share of 1 pence each for every 50 ordinary shares of 0.02 pence each then in issue.

The preference shares will be redeemed conditional on or simultaneous with the admission of the Company's ordinary share capital to the Official List of the UK Listing Authority.

Professor John Martin and Dr Kalevi Kurkijarvi resigned from the Board effective 3 March 2004.

Yours faithfully

Delaite & Tarche LLP

Deloitte & Touche LLP Chartered Accountants

## PART IX — DETAILS OF THE OFFER

## Summary of the Offer

The Offer comprises the offer of 41,413.996 New Ordinary Shares by the Company (representing approximately 33 per cent. of the enlarged issued share capital of the Company (assuming that the Over-Allotment Option is not exercised)) and 142,000 existing Ordinary Shares by three Finnish Shareholders (which are being sold to enable these Finnish Shareholders to meet their Finnish tax liabilities which will crystallise upon Admission). In addition, the Company has granted Credit Suisse First Boston as stabilising manager the Over-Allotment Option, exercisable for a period of up to 30 days from Admission, which will require the Company to issue up to an additional 6,233,399 New Ordinary Shares at the Offer Price to cover over-allotments in connection with the Offer and to cover short positions resulting from stabilisation transactions, if any.

The Offer is being made by way of an offer to certain institutional investors in the UK, to QIBs in the United States in transactions exempt from the registration requirements of the Securities Act, and to certain institutional investors in the rest of the world. As part of the Offer, qualifying employees and their immediate family members will have the opportunity to subscribe up to 21,931 of the New Ordinary Shares pursuant to the Employee Share Offer.

Under the Offer, which is fully underwritten by the Underwriters, all Ordinary Shares will be issued or sold at the Offer Price.

Admission is expected to take place and unconditional dealings in the Ordinary Shares are expected to commence on the London Stock Exchange on 8 March 2004. Prior to that time, it is expected that dealings in the Ordinary Shares will commence on a conditional basis on the London Stock Exchange on 3 March 2004. These dates may be changed. Dealings on the London Stock Exchange before Admission will only be settled if Admission takes place and will be for settlement three business days after Admission. All dealings before the commencement of unconditional dealings will be of no effect if Admission does not take place and such dealings will be at the sole risk of the parties concerned.

The New Ordinary Shares are being issued by the Company to raise approximately £50.3 million, net of expenses. Following the Offer, the Directors will be interested in 7,878,425 Ordinary Shares, representing 6.2 per cent. of the enlarged issued share capital of the Company (assuming that the Over-Allotment Option is not exercised).

#### Offer Arrangements

# 1.1 Underwriting Agreement

On 3 March 2004, the Selling Shareholders (1), the Company (2), the Directors (3) Credit Suisse First Boston (4) and Nomura (5) entered into the Underwriting Agreement pursuant to which:

- (a) Credit Suisse First Boston and Nomura shall, as agent for the Company and the Selling Shareholders and subject to certain conditions, severally procure subscribers for and/or buyers of, or failing which themselves subscribe and/or purchase, the Offer Shares at the Offer Price;
- (b) for the services provided by Credit Suisse First Boston and Nomura, the Company will pay to Credit Suisse First Boston and Nomura aggregate commissions of 5.8 per cent. of the aggregate value at the Offer Price of the 41,413,996 New Ordinary Shares, inclusive of a corporate finance fee of £150,000;
- (c) the Company will be responsible for all costs and expenses (together with any related value added tax) of the Offer save for the commissions and stamp duty payable in respect of the Offer of the Sale Shares which will be payable by the Selling Shareholders;
- (d) the commissions, fees and expenses to be borne by the Selling Shareholders and the Company as referred to in paragraphs (b) and (c) above will be deducted from the proceeds of the offering;
- (e) the Company, the Directors and Professor John Martin have given certain usual warranties in relation to this document and the business of the Group, and the Company, Dr Nigel Parker, Martyn Williams, Professor John Martin and Professor Seppo Ylä-Herttuala have given certain usual indemnities to Credit Suisse First Boston and Nomura;
- (f) the Directors, John Martin, Jukka Luoma and Leena Luoma have undertaken to Credit Suisse First Boston and Nomura not to dispose of any Ordinary Shares at any time within 12 months of

Admission except in limited circumstances specified (including, *inter alia*, transfer to spouses or to trustees for their benefit and disposals by way of acceptance of an offer for all or part of the entire issued share capital of the Company and the sale by Jukka Luoma, Leena Luoma and Seppo Ylä-Herttuala of a number of shares sufficient to cover Finnish tax liabilities crystallising on Admission as part of the Offer) and have further undertaken that, for a period of two years after Admission, they will only dispose of any Ordinary Shares through the brokers for the time being of the Company;

- (g) the Company has agreed not to issue, sell, contract to sell, pledge or otherwise dispose (or publicly announce any such issue, offer, sale or disposal) of any shares in the Company or securities convertible or exchangeable into, or exercisable for any shares in the Company without the prior written consent of Credit Suisse First Boston (such consent not to be unreasonably withheld) until after the first anniversary of Admission;
- (h) the Company has authorised Credit Suisse First Boston to over-allocate or effect transactions which stabilise, support or maintain the market price of the Ordinary Shares at a level higher than that which might otherwise prevail in the open market, for a limited period; and
- (i) the Company has granted Credit Suisse First Boston the Over-Allotment Option over in aggregate 6,233,399 New Ordinary Shares at the Offer Price. Any shares issued pursuant to the Over-Allotment Option will be issued on the same terms and conditions as the other New Ordinary Shares being issued by the Company pursuant to the Offer. Credit Suisse First Boston may exercise the option in order, amongst other things, to facilitate over-allotments in connection with the Offer and to cover short positions resulting from stabilisation transactions, being those that stabilise, support, maintain or otherwise affect the market price of the Ordinary Shares at a price higher than that which might otherwise prevail. The option may be exercised at any time during the 30 day period commencing on Admission. However, there is no obligation on Credit Suisse First Boston, or any agent of Credit Suisse First Boston, to do this. Such transactions may be effected on the London Stock Exchange and any other securities market, over the counter market, stock exchange or otherwise and, if commenced, may be discontinued at any time and must be brought to an end after a limited period. Save as required by law, Credit Suisse First Boston does not intend to disclose the extent of any over-allotment and/or stabilisation transactions under the Offer.

The principal obligations of Credit Suisse First Boston and Nomura under the Underwriting Agreement are conditional, *inter alia*, upon Admission. Credit Suisse First Boston and Nomura may, before Admission, terminate their obligations under the Underwriting Agreement in certain circumstances (including in the event of a material breach of the warranties referred to above or in the event of *force majeure*).

At the date of this document (prior to the Capital Reorganisation) Nomura is the direct or beneficial owner of 5,689,189 Ordinary Shares representing 14 per cent. of the voting or equity securities of the Company (see paragraph 9.4 of Part X). Accordingly, under certain circumstances, the Company may be considered a "connected issuer" of Nomura under applicable Canadian securities legislation. See "Relationship between the Company and Nomura" on page 133.

# 1.2 Employee Share Offer

Under the Employee Share Offer, Ark's Directors and employees and their spouses are given the opportunity to subscribe for shares in the Company at the Offer Price as part of the Offer, for a minimum amount of £200 and thereafter in multiples of £100. Directors, employees and their immediate family members will be given a preferential allocation in the Offer. The number of Ordinary Shares for which applications have been received pursuant to the Employee Share Offer is 21,931.

## 1.3 Lock-up Agreements

Under the terms of lock-up agreements with Credit Suisse First Boston and Nomura, Stephen Barker, Alan Boyd and Paul Higham have agreed (subject to certain limited exceptions) not to sell any of their Ordinary Shares for a period of 12 months from Admission and all substantial Shareholders in the Company (as listed in paragraph 9.4 of Part X) have agreed not to sell any of their Ordinary Shares for a period of six months from Admission.

In addition, under the Underwriting Agreement, the Directors, John Martin, Jukka Luoma and Leena Luoma have agreed (subject to certain limited exceptions) not to sell any of their Ordinary Shares for a period of 12 months from Admission.

The Company has agreed not to issue, sell, contract to sell, pledge or otherwise dispose of (or publicly announce any such issue, offer, sale or disposal) any shares in the Company or securities convertible or exchangeable into, or exercisable for any shares in the Company without the prior written consent of Credit Suisse First Boston (such consent not to be unreasonably withheld) until after the first anniversary of Admission.

## Use of Proceeds of the Offer

Ark will raise approximately £50.3 million, net of expenses, by the issue of the New Ordinary Shares (assuming that the Over-Allotment Option is not exercised). The Directors intend that these proceeds, together with the Company's existing resources (£8,453,569 million at 31 January 2004), will be applied primarily towards progressing the products listed in Part I to a stage where they can generate significant revenues and, in particular, for the following purposes:

- approximately 51 per cent. on the continued development of its lead product candidates including investment in manufacturing capacity;
- approximately 30 per cent. on the commercial launch of, and subsequent sales and marketing for, Kerraboot® and other products as they receive marketing approval;
- · approximately 13 per cent. on other research and development activities; and
- the balance for working capital and other general corporate purposes.

# Admission, Settlement and Dealings

Consideration for the Offer Shares is payable in cash. Application has been made to the UK Listing Authority and the London Stock Exchange for the Ordinary Shares to be admitted to the Official List and to trading on the main market of the London Stock Exchange. It is expected that Admission will take place and that unconditional dealings will commence on 8 March 2004.

Application has been made for the Ordinary Shares to be admitted to CREST with effect from Admission. Accordingly, settlement of transactions in the Ordinary Shares following Admission may take place within CREST if any Shareholder so wishes. CREST is a paperless settlement procedure enabling shares to be evidenced otherwise than by a certificate and transferred otherwise than by a written instrument. The articles of association of the Company permit the holding of shares under the CREST system.

CREST is a voluntary system and holders of Ordinary Shares who wish to receive and retain share certificates will be able to do so. Investors applying for Ordinary Shares under the Offer may, however, elect to receive shares in uncertificated form if they are a system-member (as defined by the CREST Regulations) in relation to CREST. In general, the Ordinary Shares that are held in uncertificated form under the CREST system will be subject to the rules, regulations and procedures governing CREST and its system-members as in effect from time to time. Ownership of an Ordinary Share held in uncertificated form under the CREST system may only be transferred in compliance with the procedures of CREST in effect from time to time.

# Selling Restrictions

The distribution of this document and the offer of Ordinary Shares in certain jurisdictions may be restricted by law and therefore persons into whose possession this document comes should inform themselves about and observe any such restrictions, including those in the paragraphs that follow. Any failure to comply with these restrictions may constitute a violation of the securities law of any such jurisdiction.

# **United States**

The Ordinary Shares have not been and will not be registered under the Securities Act or under any state securities laws of the United States, and may not be offered or sold within the United States or to, or for the account or benefit of, US persons (as defined in Regulation S), except to QIBs in transactions exempt from the registration requirements of the Securities Act. The Ordinary Shares are being offered and sold outside the United States to non-US persons in offshore transactions in reliance on Regulation S.

Pursuant to the Underwriting Agreement, each of the Underwriters has agreed that it and its affiliates will not offer, sell or deliver the Ordinary Shares (i) as part of their distribution at any time or (ii) otherwise until 40 days after the later of the commencement of the Offer and the last date on which the Ordinary Shares are delivered under the Offer, within the United States or to, or for the account or benefit of, US persons, other than to QIBs in transactions exempt from the registration requirements of the Securities Act.

In addition, until 40 days after the allocation of the Ordinary Shares in the Offer, an offer or sale of Ordinary Shares within the United States by a dealer (whether or not it is participating in the Offer) may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than in accordance with Rule 144A.

# United Kingdom

Each Underwriter has represented and agreed that (i) it has not offered or sold and prior to application for listing of the Ordinary Shares being made in accordance with Part VI of the FSMA will not offer or sell, any Ordinary Shares in the United Kingdom or elsewhere by means of any document (except in circumstances which do not constitute an offer to the public), (ii) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the Ordinary Shares in, from or otherwise involving the UK, and (iii) it has only issued or passed on, and will only issue or pass on, in the UK any document received by it in connection with Admission of the Ordinary Shares other than any document which consists of or any part of listing particulars, supplementary listing particulars or any other document required or permitted to be published by listing rules under Part VI of the FSMA, to a person who is of a kind described in Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2001 (as amended) or is a person to whom the document may otherwise lawfully be issued or passed on.

#### Canada

# Relationship between the Company and Nomura

As at the date of this document (prior to the Capital Reorganisation) Nomura is the direct or beneficial owner of 5,689,189 Ordinary Shares representing 14 per cent. of the voting or equity securities of the Company (see paragraph 9.4 of Part X). Accordingly, under certain circumstances, the Company may be considered a "connected issuer" of Nomura under applicable Canadian securities legislation. The decision to distribute the Ordinary Shares and the determination of the terms of the distribution were made through negotiations between the Company and the Underwriters. Nomura will not receive directly or indirectly any benefit from this Offer other than its portion of the fee payable by the Company to the Underwriters. See "Offer Arrangements".

# Resale Restrictions

The Offer is being made in British Columbia, Alberta, Ontario and Quebec (the "Provinces") only on a private placement basis exempt from the requirement that the Company prepare and file a prospectus with the securities regulatory authorities in each province where New Ordinary Shares are offered. Any resale of the New Ordinary Shares in Canada must be made under applicable securities laws, which will vary depending on the relevant jurisdiction, and which may require resales to be made under available statutory exemptions or under a discretionary exemption granted by the applicable Canadian securities regulatory authority. Purchasers are advised to seek legal advice prior to any resale of the New Ordinary Shares.

## Representations of Purchasers

By purchasing New Ordinary Shares in the Provinces and accepting a purchase confirmation a purchaser is representing to the Company and the dealer from whom the purchase confirmation is received that:

- the purchaser is entitled under applicable provincial securities laws to purchase the New Ordinary Shares without the benefit of a prospectus qualified under those securities laws;
- where required by law, that the purchaser is purchasing as principal and not as agent; and
- the purchaser has reviewed the text above under Resale Restrictions.

Rights of Action — Ontario Purchasers Only

Under Ontario securities legislation, a purchaser who purchases a security offered by this document during the period of distribution will have a statutory right of action for damages, or while still the owner of the New Ordinary Shares, for rescission against the Company in the event that this document contains a misrepresentation. A purchaser will be deemed to have relied on the misrepresentation. The right of action for damages is exercisable not later than the earlier of 180 days from the date the purchaser first had knowledge of the facts giving rise to the cause of action and three years from the date on which payment is made for the New Ordinary Shares. The right of action for rescission is exercisable not later than 180 days from the date on which payment is made for the New Ordinary Shares. If a purchaser elects to exercise the right of action for rescission, the purchaser will have no right of action for damages against the Company. In no case will the amount recoverable in any action exceed the price at which the New Ordinary Shares were offered to the purchaser and if the purchaser is shown to have purchased the securities with knowledge of the misrepresentation, the Company will have no liability. In the case of an action for damages, the Company will not be liable for all or any portion of the damages that are proven not to represent the depreciation in value of the New Ordinary Shares as a result of the misrepresentation relied upon. These rights are in addition to, and without derogation from, any other rights or remedies available at law to an Ontario purchaser. The foregoing is a summary of the rights available to an Ontario purchaser. Ontario purchasers should refer to the complete text of the relevant statutory provisions.

## Enforcement of Legal Rights

All the Company's Directors and officers as well as the experts named herein may be located outside of Canada and, as a result, it may not be possible for Canadian purchasers to effect service of process within Canada upon the Company or those persons. All or a substantial portion of the Company's assets and the assets of those persons may be located outside of Canada and, as a result, it may not be possible to satisfy a judgment against the Company or those persons in Canada or to enforce a judgment obtained in Canadian courts against the Company or those persons outside of Canada.

## Taxation and Eligibility for Investment

Canadian purchasers of New Ordinary Shares should consult their own legal and tax advisers with respect to the tax consequences of an investment in the New Ordinary Shares in their particular circumstances and about the eligibility of the New Ordinary Shares for investment by the purchaser under relevant Canadian legislation.

## **Investor Representations and Agreements**

## Ordinary Shares Offered and Sold to QIBs

Because the Ordinary Shares have not been and will not be registered under the Securities Act, purchasers of Ordinary Shares in the United States are advised to consult legal counsel prior to making any offer for, resale, pledge or other transfer of Ordinary Shares.

Each purchaser of Ordinary Shares offered and sold in the United States will be deemed to have represented, agreed and acknowledged that:

- (1) it is (a) a QIB, (b) acquiring such Ordinary Shares for its own account or for the account of another QIB and (c) aware, and each beneficial owner of such Ordinary Shares has been advised, that the sale of such Ordinary Shares to it is being made in reliance on Rule 144A;
- (2) it understands that such Ordinary Shares have not been and will not be registered under the Securities Act and may not be offered, sold, pledged or otherwise transferred except (a) in accordance with Rule 144A to a person that it and any person acting on its behalf reasonably believes is a QIB purchasing for its own account or for the account of another QIB, (b) in an offshore transaction in accordance with Rule 903 or Rule 904 of Regulation S or (c) pursuant to an exemption from registration under the Securities Act provided by Rule 144 thereunder (if available), in each case in accordance with all applicable securities laws of any state of the US;
- (3) it will, and each subsequent holder is required to, notify any subsequent purchaser of Ordinary Shares from it of the resale restrictions referred to in (2)(a), (b) and (c);
- (4) it understands that any certificated Ordinary Shares, unless otherwise determined by the Company in accordance with applicable law, will bear a legend substantially to the following effect:

THE ORDINARY SHARES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE US SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR WITH ANY SECURITIES REGULATORY AUTHORITY OF ANY STATE OR OTHER JURISDICTION OF THE UNITED STATES AND MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT (1) IN ACCORDANCE WITH RULE 144A UNDER THE SECURITIES ACT TO A PERSON THAT THE HOLDER AND ANY PERSON ACTING ON ITS BEHALF REASONABLY BELIEVE IS A QUALIFIED INSTITUTIONAL BUYER WITHIN THE MEANING OF RULE 144A PURCHASING FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF ANOTHER OUALIFIED INSTITUTIONAL BUYER, (2) IN AN OFFSHORE TRANSACTION IN ACCORDANCE WITH RULE 903 OR RULE 904 OF REGULATION S UNDER THE SECURITIES ACT OR (3) PURSUANT TO AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT, PROVIDED BY RULE 144 THEREUNDER (IF AVAILABLE), IN EACH CASE IN ACCORDANCE WITH ANY APPLICABLE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES. NO REPRESENTATION CAN BE MADE AS TO THE AVAILABILITY OF THE EXEMPTION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT FOR RE-SALES OF THESE ORDINARY SHARES. NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THE FOREGOING, THE ORDINARY SHARES MAY NOT BE DEPOSITED INTO ANY UNRESTRICTED DEPOSITARY RECEIPT FACILITY IN RESPECT OF THE COMPANY'S SHARES ESTABLISHED OR MAINTAINED BY A DEPOSITARY BANK:

- (5) notwithstanding anything to the contrary in the foregoing, Ordinary Shares may not be deposited into any unrestricted depository receipt facility in respect of Ordinary Shares of the Company established or maintained by a depository bank; and
- (6) the Company, the Selling Shareholders, the Registrar, the Underwriters and their affiliates, and others will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements. If it is acquiring any Ordinary Shares for the account of one or more QIBs, it represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgements, representations and agreements on behalf of each such account.

In addition, up to 40 days after the allocation of the Ordinary Shares in the Offer, an offer or sale of Ordinary Shares within the United States by any dealer (whether or not participating in the Offer) may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than in accordance with Rule 144A.

Prospective purchasers are hereby notified that the sellers of the Ordinary Shares may be relying on the exemption from the provisions of section 5 of the Securities Act provided by Rule 144A.

# Ordinary Shares Offered and Sold Pursuant to Regulation S

Each purchaser of Ordinary Shares outside the United States pursuant to Regulation S and each subsequent purchaser of such Ordinary Shares in resales prior to the expiration of 40 days after the later of the commencement of the Offer and the last date on which Ordinary Shares are delivered under the Offer will be deemed to have represented, agreed and acknowledged that:

- (1) it is aware that the sale of such Ordinary Shares to it is being made pursuant to and in accordance with Rule 903 of Regulation S;
- (2) upon purchasing the Ordinary Shares, either (a) it will be the beneficial owner of such Ordinary Shares and it is not a US person (as defined in Regulation S), it is located outside of the United States (as defined in Regulation S), and it has acquired, or has agreed to acquire and will have acquired, such Ordinary Shares outside the United States, or (b) it is a broker-dealer acting on behalf of its customer, it is not a US person and it is located outside the United States, or (c) it is a broker-dealer acting on behalf of its customer, it is not a US person, it is located outside the United States, and its customer has confirmed to it that (i) upon purchasing the Ordinary Shares, such customer will be the beneficial owner of such Ordinary Shares, and (ii) such customer is not a US person and is located outside the United States and, in any event, it is not an affiliate of the Company or a person acting on behalf of such an affiliate;

- (3) it understands that such Ordinary Shares have not been and will not be registered under the Securities Act and, accordingly, may not be offered, sold, pledged or otherwise transferred prior to the expiration of 40 days after the later of the commencement of the Offer and the last date on which Ordinary Shares are delivered under the Offer except (a) in accordance with Rule 144A under the Securities Act to a person that it and any person acting on its behalf reasonably believe is another QIB purchasing for its own account or the account of another QIB or (b) in an offshore transaction in accordance with Rule 903 or Rule 904 of Regulation S, in each case in accordance with any applicable securities laws of any State of the United States; and
- (4) the Company, the Selling Shareholders, the Registrar, the Underwriters and their affiliates, and others will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements.

In addition, until 40 days after the allocation of the Ordinary Shares in the Offer, an offer or sale of Ordinary Shares within the United States by any dealer (whether or not participating in the Offer) may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than in accordance with Rule 144A.

## PART X — ADDITIONAL INFORMATION

## 1. DIRECTORS' RESPONSIBILITY STATEMENT

The Directors of the Company, whose names appear on page 6 of this document, accept responsibility for the information contained in this document. To the best of the knowledge and belief of the Directors (who have taken all reasonable care to ensure that such is the case) the information contained in this document is in accordance with the facts and does not omit anything likely to affect the import of such information.

## 2. THE COMPANY

The Company was incorporated and registered in England and Wales on 31 October 2001 with registered number 4313987 under the Act as a public limited company under the name Firstjasper public limited company. On 1 February 2002 the Company changed its name to Ark Therapeutics Group plc. On 15 August 2002 the Company re-registered as a private limited company and on 25 February 2004 the Company re-registered as a public limited company. The principal legislation under which the Company operates is the Act as amended by the Companies Act 1989. The registered office, head office and the principal place of business in the United Kingdom of the Company is at 1 Fitzroy Mews, London W1T 6DE.

## 3. SUBSIDIARIES

3.1 The Company acts as the holding company of the Group, the principal activities of which are research and development of products in areas of specialist medicine. Ark Therapeutics Limited and KerraTec Inc. are wholly-owned subsidiaries of the Company and Ark Therapeutics Oy is a wholly-owned subsidiary of Ark Therapeutics Limited.

Name	Principal activity	Issued and fully paid share capital
Ark Therapeutics Limited	Research and development of products in areas of specialist medicine	£7,751.6202
Ark Therapeutics Oy	Research and development of products in areas of specialist medicine	EUR 10,091.28
KerraTec Inc	US Commercialisation of Kerraboot®	\$850

3.2 Ark Therapeutics Limited was incorporated and registered in England and Wales on 14 April 1997 with registered number 3351628 under the Act as a private limited company under the name Gladselect Limited. On 1 July 1997 it changed its name to Eurogene Limited and on 31 January 2001 it changed its name to Ark Therapeutics Limited. Its registered office is at 1 Fitzroy Mews, London W1T 6DE. Ark Therapeutics Oy was incorporated in Finland on 20 October 1993 under the name Medigene Oy. On 24 July 2000 it changed its name to Oy Quattrogene Limited and on 2 February 2001 it changed its name to Ark Therapeutics Oy. Its registered number is 0946009-7 and its registered office is at Neulaniementie 2 L 9, FIN-70210, Kuopio, Finland. KerraTec Inc. was incorporated on 23 December 2003 under the General Corporation Law of Delaware. Its registered office is at 2711 Centreville Road, Suite 400, City of Wilmington, County of New Castle, Delaware 19808, US with registered number 3744332.

# 4. FUND RAISINGS

Since February 1998, Ark has raised approximately £32.5 million before expenses from equity fund raising exercises and share issues. Details of these fund raisings are as follows:

Date fund raising/share issue	Nature of financing	Gross amount raised (£)	Share price (pence)	Implied historical valuation <sup>(2)</sup>
6 December 1998	Private placement	3,000,000	$60^{(1)}$	£ 6,000,000
27 April 2000	Private placement	15,042,846	$100^{(1)}$	£27,416,580
13 August 2001	Private placement	14,440,000	$125^{(3)}$	£54,396,234

<sup>(1)</sup> On 23 February 1999, each of the ordinary shares of 0.1 pence was subdivided into 5 ordinary shares of 0.02 pence and 'A' and 'B' ordinary shares of 0.02 pence were created. The share price shown has been adjusted to show the price that would have been paid for the shares had the subdivision taken place before the placement.

- (2) The implied historical valuation is calculated by multiplying the share price at the time of the fundraising by the number of fully diluted shares at that date.
- (3) The price per share paid at the time of the fund raising was 148 pence but this was subsequently adjusted to 125 pence to reflect the fact that an initial public offering had not been achieved by 18 January 2003, as per the terms of that fund raising.

The increase in share price on each subsequent funding reflects the increase in value of the Group as it has developed.

# 5. SHARE CAPITAL

#### Ark Therapeutics Limited

- 5.1 Ark Therapeutics Limited was incorporated on 14 April 1997 with an authorised share capital of £1,000 divided into 1,000 ordinary shares of £1 each, of which two ordinary shares were issued at par to the subscribers to Ark Therapeutics Limited's memorandum of association.
- 5.2 Since 14 April 1997 there have been the following changes in the authorised share capital and the issued and fully-paid share capital of Ark Therapeutics Limited:
  - (a) by an ordinary resolution passed on 10 June 1997, each of the existing ordinary shares of £1.00 (both issued and authorised but unissued) was subdivided into 1,000 ordinary shares of 0.1 pence;
  - (b) on 27 June 1997 998,000 ordinary shares with a nominal value of 0.1 pence per share were allotted for a consideration of 0.1 pence per share to be treated as fully paid up;
  - (c) on 6 February 1998 the authorised share capital was increased from £1,000 to £2,300 by the creation of an additional 1,300,000 ordinary shares of 0.1 pence each;
  - (d) on 6 February 1998 1,000,000 ordinary shares with a nominal value of 0.1 pence per share were allotted for a consideration of £3.00 per share to Merlin General Partner Limited, as General Partner of the Merlin Fund L.P., to be treated as fully paid up;
  - (e) on 6 July 1998 66,666 ordinary shares with a nominal value of 0.1 pence per share were allotted for a consideration of £3.00 per share, to be treated as fully paid up;
  - (f) on 23 February 1999 the authorised share capital was increased from £2,300 to £2,350 by the creation of an additional 50,000 ordinary shares of 0.1 pence each;
  - (g) by an ordinary resolution passed on 25 April 2000:
    - (i) each of the issued and unissued ordinary shares of 0.1 pence each was subdivided into 5 ordinary shares of 0.02 pence each; and
    - (ii) the authorised share capital was increased from £2,350 to £8,625.6692 by the creation of an additional 15,032,846 'A' ordinary shares of 0.02 pence each and 16,345,500 ordinary shares of 0.02 pence each;
  - (h) on 27 April 2000, 10,000 ordinary shares with a nominal value of 0.02 pence each were allotted for a consideration of £1.00 per share and 15,032,846 'A' ordinary shares of 0.02 pence each were allotted for a consideration of £1.00 per share to institutional investors including Biofund Ventures II Ky, Concordia Investor I Kb, Concordia Investor II Kb, Mountcashel plc, Sampo Enterprise Insurance Co. Ltd. Saastamoisen Saatio r.s., Optiomi Limited, TVM IV GmbH and Co. KG, The Merlin Fund L.P. and Nomura International plc;
  - (i) between 10 January 2001 and 11 May 2001 3,625,168 ordinary shares with a nominal value of 0.02 pence each were issued for a consideration of £1.38 per share, to be treated as fully paid up;
  - (j) by an ordinary resolution passed on 13 August 2001 the authorised share capital was increased by £2,500 by the creation of 12,500,000 'B' ordinary shares of 0.02 pence each; and
  - (k) on 13 August 2001, 9,756,757 'B' ordinary shares with a nominal value of 0.02 pence per share were allotted for a total consideration of £14,440,000 (representing £1.48 per 'B' ordinary share) to institutional investors including Nomura International plc, TVM IV GmbH and Co. KG, BioFund Ventures II Ky, Concordia Investor I Kb, Concordia Investor II Kb, Bionex Investments Plc, Bankinvest, Pensman Nominees Limited, Northern Investors Company PLC and Merlin General Partner II Limited (as general partner of the Merlin Biosciences Fund L.P. and as managing partner of the Merlin Biosciences Fund GbR).

## The Company

- 5.3 The Ordinary Shares are in registered form, are capable of being held in uncertificated form and comply with the laws of England and Wales. Application has been made for Admission and it is expected that unconditional dealings in the Ordinary Shares will commence on 8 March 2004. None of the Ordinary Shares have been marketed or are available in whole or in part to the public in conjunction with the application for the Ordinary Shares to be admitted to the Official List. In connection with the Offer, temporary documents of title will not be issued. However, it is expected that share certificates, for those who wish to receive them, will be posted first class to shareholders by 15 March 2004.
- 5.4 The Company was incorporated on 31 October 2001 with an authorised share capital of £100,000 divided into 100,000 ordinary shares of £1 each, of which two ordinary shares were issued at par to the subscribers to the Company's memorandum of association.
- 5.5 Since 31 October 2001 there have been the following changes in the authorised share capital and the issued and fully-paid share capital of the Company:
  - (a) by a special resolution passed on 17 April 2002:
    - (i) each of the issued ordinary shares of £1 each were subdivided and reclassified into 5,000 'B' ordinary shares of 0.02 pence each;
    - (ii) each of the 99,998 authorised but unissued ordinary shares of £1 each were subdivided into 5,000 ordinary shares of 0.02 pence each;
    - (iii) immediately following the sub-division set out in (ii) above 15,032,846 ordinary shares of 0.02 pence each were reclassified as 'A' ordinary shares of 0.02 pence each and 9,746,757 ordinary shares of 0.02 pence each were reclassified as 'B' ordinary shares of 0.02 pence each;
    - (iv) the authorised share capital of the Company was increased from £100,000 to £1,050,000 by the creation of a further 4,500,000,000 ordinary shares of 0.02 pence each and 50,000 nonvoting redeemable preference shares of £1 each ("Preference Shares"), redeemable at par conditionally upon and simultaneously with Admission or, if earlier, 31 December 2005;
  - (b) on 24 April 2002 the Company acquired the whole of the issued share capital of Ark Therapeutics Limited in consideration for the issue of its shares. On 24 April 2002 13,968,498 ordinary shares of 0.02 pence each, 15,032,846 'A' ordinary shares of 0.02 pence each and 9,756,757 'B' ordinary shares of 0.02 pence each were issued to the shareholders of Ark Therapeutics Limited;
  - (c) on 25 April 2002 50,000 redeemable preference shares of £1.00 each were issued, credited as fully paid;
  - (d) by an ordinary resolution passed on 16 January 2004, 1,250,000 authorised but unissued ordinary shares were reclassified as 'C' Ordinary Shares of 0.02 pence each and 250,000 authorised but unissued ordinary shares were reclassified as 'D' Ordinary Shares of 0.02 pence each;
  - (e) on 12 February 2004, 175,000 ordinary shares of 0.02 pence each were issued, credited as fully paid;
  - (f) on 26 February 2004, 1,500,000 Management Shares of 0.02 pence each were issued, credited as fully paid; and
  - (g) by a special resolution passed on 24 February 2004:
    - (i) conditional upon and simultaneously with Admission each 'A' Ordinary Share of 0.02 pence shall automatically be converted into one Ordinary Share of 0.02 pence each and each 'B' Ordinary Share of 0.02 pence shall automatically be converted into 1.184 Ordinary Shares of 0.02 pence (for which purpose the Directors may capitalise such sum as may be necessary by paying up in full unissued Ordinary Shares of 0.02 pence);
    - (ii) conditional upon and simultaneously with Admission (and immediately after the conversion referred to in paragraph (i) above) Ordinary Shares of 0.02 pence shall be allotted credited as fully paid to shareholders on the register of members of the Company immediately prior to Admission on the basis of 99 Ordinary Shares of 0.02 pence for every one Ordinary Share of 0.02 pence held by such Shareholders;

- (iii) conditional upon and simultaneously with Admission (and immediately following the allotment of shares referred to in paragraph (ii) above) the Ordinary Shares of 0.02 pence each in the capital of the Company shall be consolidated into Ordinary Shares of 1 pence each, on the basis of one Ordinary Share of 1 pence each for every 50 Ordinary Shares of 0.02 pence each;
- (iv) conditional upon and simultaneously with Admission and immediately following redemption of the Management Shares, the authorised share capital of the Company shall be increased to £2,000,000 by the creation of an additional 100,030,000 Ordinary Shares of 1 pence each;
- conditional upon and simultaneously with Admission, the Directors were generally and unconditionally authorised for the purposes of section 80(1) of the Act to exercise all the powers of the Company to allot relevant securities (within the meaning of section 80(2) of the Act) up to an aggregate nominal amount of £1,991,913.38 provided that in the case of any such allotment (other than allotments of (a) Ordinary Shares pursuant to or as contemplated by the Offer, (b) Ordinary Shares of 0.02 pence each pursuant to paragraph (ii) above or (c) the Ordinary Shares of 1 pence each pursuant to paragraph (vii) below (together, "Initial Allotments")) such authority shall be limited to the allotment of relevant securities up to an aggregate nominal amount equal to one third of the aggregate nominal amount of all Ordinary Shares of 1 pence each issued and fully paid immediately after Admission, such authority to expire on the date falling 15 months after the date of Admission or, if earlier, at the conclusion of the Company's annual general meeting to be held in 2005 (save that the Company may allot relevant securities pursuant to an offer or agreement entered into prior to such expiry), and such authority to be in substitution for any or all authorities previously conferred upon the Directors for the purposes of section 80 of the Act:
- (vi) conditional upon and simultaneously with Admission, the Directors were generally and unconditionally empowered to allot equity securities for cash pursuant to the authority referred to in paragraph (v) above as if the pre-emption rights in section 89(1) of the Act did not apply provided that such power be limited to:
  - (A) the Initial Allotments;
  - (B) the allotment of equity securities for cash in consideration of or pursuant to a rights issue or any other offer in favour of the holders of equity securities and other persons entitled to participate therein in proportion to the respective amounts of equity securities then held by them, but subject to such exclusions or other arrangements as the Directors may consider necessary, expedient or appropriate to deal with any fractional entitlements or legal or practical difficulties in any territory; and
  - (C) the allotment of equity securities for cash up to an aggregate nominal amount equal to 5 per cent. of the aggregate nominal amount of all Ordinary Shares issued and fully paid immediately after Admission,
  - provided that such power shall expire on the date falling 15 months after the date of Admission or, if earlier, at the conclusion of the Company's annual general meeting to be held in 2005:
- (vii) conditional upon and simultaneously with Admission, all of the issued Management Shares are to be redeemed by the Company, and the holders of the Management Shares will be issued such number of Ordinary Shares as calculated in accordance with the provisions of the articles of association of the Company.
- 5.6 The powers referred to at paragraphs 5.5(g)(v) and (vi) will be utilised for the purposes of the Offer.
- 5.7 On 3 March 2004, 41,413,996 Ordinary Shares will, subject to Admission, be issued pursuant to the Offer at a price of 133 pence per Ordinary Share.
- 5.8 (a) (i) As at the date of this document, the Company has an authorised share capital of £1,050,000 divided into 4,973,710,397 Ordinary Shares of 0.02 pence each, 15,032,846 'A' Ordinary Shares of 0.02 pence each, 9,756,757 'B' Ordinary Shares of 0.02 pence each, 1,250,000 'C' Ordinary Shares of 0.02 pence each, 250,000 'D' Ordinary Shares of 0.02 pence each and 50,000 redeemable preference shares of £1.00 each, and an issued share capital of

- 14,143,498 Ordinary Shares of 0.02 pence each, 15,032,846 'A' Ordinary Shares of 0.02 pence each, 9,756,757 'B' Ordinary Shares of 0.02 pence each, 1,250,000 'C' Ordinary Shares of 0.02 pence each, 250,000 'D' Ordinary Shares of 0.02 pence each and 50,000 redeemable preference shares of £1.00 each;
- (ii) conditional upon and simultaneously with Admission each 'A' Ordinary Share of 0.02 pence each shall automatically be converted into one Ordinary Share of 0.02 pence each, each 'B' Ordinary Share of 0.02 pence shall automatically be converted into Ordinary Shares of 0.02 pence each (for which purpose holders of 'B' Ordinary Shares shall be issued Ordinary Shares on the basis of 1.184 Ordinary Shares of 0.02 pence for every 'B' Ordinary Share of 0.02 pence), each 'C' Ordinary Share of 0.02 pence each shall be redeemed by the Company, and the holders of such shares shall be issued 2,854,665 Ordinary Shares of 1 pence each, each 'D' Ordinary Share of 0.02 pence shall be redeemed by the Company, and the holders of such shares shall be issued 495,639 Ordinary Shares of 1 pence each and each redeemable preference share of £1.00 each shall be redeemed by the Company;
- (iii) conditional upon and simultaneously with Admission (and immediately after the conversion referred to in the above paragraph) 99 Ordinary Shares of 0.02 pence each shall be issued, credited as fully paid, for every one Ordinary Share of 0.02 pence held; and
- (iv) conditional upon and simultaneously with Admission (and immediately after the allotment referred to in the above paragraph) the Ordinary Shares of 0.02 pence shall then be consolidated into Ordinary Shares of 1 pence each, on the basis of one Ordinary Share of 1 pence for every 50 Ordinary Shares of 0.02 pence each.
- (b) The authorised share capital of the Company at Admission will be £2,000,000 divided into 200,000,000 Ordinary Shares of 1 pence each of which 126,220,994 Ordinary Shares have been issued or will be issued pursuant to the Offer (assuming no exercise of the Over-Allotment Option) and, are or will be fully paid or credited as fully paid.
- (c) The authorised but unissued share capital following the passing of the resolutions referred to at paragraph 5.5 above and following the issue of the Ordinary Shares pursuant to the Offer (excluding 11,549,208 outstanding share options under the Company's Share Option Plans), will be £737,790, of which the Directors will be authorised to allot £420,737, representing approximately 21 per cent. of the authorised share capital, pursuant to the authority referred to in paragraph 5.5(g)(v) above.
- (d) The provisions of section 89(1) of the Act confer on Shareholders rights of pre-emption in respect of the allotment of equity securities (as defined in section 89(2) of the Act) which are, or are to be, paid up in cash and apply to the authorised but unissued share capital except to the extent disapplied by the resolution referred to in paragraph 5.5(g)(vi) above.
- 5.9 By an agreement dated 8 June 1998, as amended, Ark has agreed, as part of the consideration paid for acquiring its Scavidin® technology, to grant the inventors of that technology options to subscribe for a total of 333,331 Ordinary Shares once the Capital Reorganisation takes place at a price £0.60 per Ordinary Share. These options will be granted within 30 working days of the grant of patents for that technology in Europe, the US or Japan but must be exercised by 31 December 2005. The inventors and the number of shares to be issued to each inventor, assuming they all exercise the option (and assuming the Capital Reorganisation has taken place) are: Professor Seppo Ylä-Herttuala (99,999), Dr. Pauliina Lehtolainen (66,666), Professor Markku Kulomaa (66,666), Dr. Varpu Marjomaki (50,000) and Dr. Kari Airenne (50,000).
- 5.10 As at 2 March 2004 (being the latest day practicable prior to the date of this document) the following options to subscribe for Ordinary Shares are outstanding under the Share Option Plans as defined and

described in paragraph 7 below. These details assume that the Capital Reorganisation has taken place and appropriate adjustments have been made to the exercise price and number of shares under option.

Plan	Date of Grant	No. of Shares Under Option	Exercise Price	Vesting Period <sup>(4)</sup>	Expiry Date
EMI Plans(1)	May-01	754,710	0.69	24/05/2002-24/05/2005	23/05/2011
	Apr-02	367,720	0.74	04/04/2003-04/04/2006	03/04/2012
	Sep-03	250,994	0.50	24/09/2004-24/09/2007	23/09/2013
	Jan-04	276,400	0.605	28/01/2005-28/01/2008	27/01/2014
		1,649,824			
Unapproved Plans	Nov-99	200,000	0.30	Fully vested	31/10/2009
and non-executive	Dec-99	400,000	0.50	Fully vested	05/12/2009
director option	Nov-98	75,000	0.30	Fully vested	22/11/2008
agreements(2)	Apr-00	602,000	0.50	25/04/2001-25/04/2004	24/04/2010
	Apr-00	170,000	0.50	Fully vested	24/04/2010
	Apr-00	350,000	0.30	19/04/2001-19/04/2004	18/04/2010
	May-01	567,290	0.69	24/05/2002-24/05/2005	23/05/2011
	May-01	600,000	0.69	Fully vested	23/05/2011
	Jul-01	45,000	0.69	04/07/2002-04/07/2005	03/07/2011
	Nov-01	50,000	0.74	20/11/2002-20/11/2005	19/11/2011
	Mar-02	937,280	0.74	21/03/2003-21/03/2006	20/03/2012
	Aug-02	50,000	0.74	31/08/2003-31/08/2006	30/08/2012
	Sep-03	1,124,006	0.50	24/09/2004-24/09/2007	23/09/2013
	Jan-04	450,000	0.605	28/01/2005-28/01/2007	27/01/2014
	Jan-04	1,320,000	0.605	28/01/2005-28/01/2008	27/01/2014
	Feb-04	150,000	0.605	06/02/2005-06/02/2007	05/02/2014
	Feb-04	590,000 <sup>(6)</sup>	0.605	08/03/2005-08/03/2007	Feb 2014
		7,680,576			
Option Deeds(3)	Sept-98	500,000	$0.0001^{(5)}$		31/08/2008
	Apr-00	260,000	$0.0001^{(5)}$	On Admission	24/04/2010
	Dec-99	300,000	0.30	On Admission	05/12/2009
	Apr-00	1,008,808	0.50	On Admission	24/04/2010
	Apr-00	150,000	0.50	On Admission	24/04/2010
		2,218,808			
		11,549,208			

Notes:

All Options were granted for nil consideration.

- (1) As defined and described in paragraph 7.1 below. These include options granted over Ark Therapeutics Limited shares (as described in paragraph 7.2 below) which are disclosed here as if they are options over Ordinary Shares in the Company.
- (2) As defined and described in paragraphs 7.2 and 7.4 below.
- (3) Granted by individual deed and exercisable from Admission, as set out in paragraph 9.2 below.
- (4) Options vest annually in equal tranches of one-third or one-quarter beginning and ending on the dates shown, with the exception of Management Options whose vesting terms are described in paragraph 7.2(c) below.
- (5) The Company shall make up the difference between the exercise price at which the shares are acquired and the nominal value of the shares acquired on exercise of the options by capitalising reserves.
- (6) The number of shares indicated assumes that the Company's share price is £6.00 or more per Ordinary Share at the time of the second anniversary of Admission (see paragraph 7.2(c) below), and is therefore the maximum number of shares subject to these Management Options.

## 5.11 Save as disclosed in this Part X:

(a) there has been no change in the amount of the issued share or loan capital of the Company and no material change in the amount of the issued share or loan capital of any of its subsidiaries (other than intra-group issues by wholly-owned subsidiaries) in the three years preceding the date of this document:

- (b) no commissions, discounts, brokerages or other special terms have been granted by the Company or any of its subsidiaries in connection with the issue or sale of any share or loan capital of the Company or any of its subsidiaries in the three years preceding the date of this document; and
- (c) no share or loan capital of the Company or any of its subsidiaries is under option or is agreed, conditionally or unconditionally, to be put under option.
- 5.12 Other than pursuant to the Offer and the Capital Reorganisation, and the exercise of options under the Company's Share Option Plans or options granted under separate option deeds as described in section 5.10 above, there is no present intention to issue any of the authorised but unissued share capital of the Company.
- 5.13 The articles of association of the Company (which were adopted by the Company, conditional on Admission, on 24 February 2004) are, in all respects, consistent with (a) the holding of the Ordinary Shares in uncertificated form, (b) the transfer of title to Ordinary Shares by means of a relevant system and (c) the Regulations. Accordingly, the Directors have resolved to permit the holding of Ordinary Shares in uncertificated form and the transfer of title to Ordinary Shares by means of a relevant system. For these purposes CREST is a relevant system.
- 5.14 The New Ordinary Shares will be issued at a price of 133 pence per Ordinary Share, representing a premium of 132 pence over their nominal value of 1 pence each, and are payable in full on application.

# 6. MEMORANDUM AND ARTICLES OF ASSOCIATION

- 6.1 The memorandum of association of the Company provides that the Company's principal object is to carry on business as a general commercial company. The objects of the Company are set out in full in clause 4 of the memorandum of association which is available for inspection at the address specified in paragraph 21 below.
- 6.2 The articles of association of the Company (the "Articles"), which were adopted (subject to and conditional upon Admission) pursuant to a special resolution passed on 24 February 2004, contain provisions, inter alia, to the following effect:

## (a) Voting rights

- (i) Shareholders shall have the right to receive notice of, to attend and to vote at all general meetings of the Company. Save as otherwise provided in the Articles, on a show of hands each holder of shares present in person and entitled to vote shall have one vote and upon a poll each such holder who is present in person or by proxy and entitled to vote shall have one vote in respect of every share held by him.
- (ii) No member shall be entitled to vote at any general meeting if any call or other sum presently payable by him in respect of shares remains unpaid or if a member has been served by the Directors with a restriction notice in the manner described in paragraph (b) below.

## (b) Restrictions on Ordinary Shares

If a member or any person appearing to be interested in shares in the Company has been duly served with a notice pursuant to section 212 of the Act and is in default in supplying to the Company the information thereby required within 14 days from the date of service of such notice the Directors may serve on such member or on any such person a notice (a "restriction notice") in respect of the shares in relation to which the default occurred ("Default Shares") and any other shares held at the date of the restriction notice directing that the member shall not be entitled to be present or to vote at any general meeting or class meeting of the Company. Where the Default Shares represent at least 0.25 per cent. of the issued shares of the Company of the same class the restriction notice may in addition direct, inter alia, that any dividend or other money which would otherwise be payable on the Default Shares shall be retained by the Company without liability to pay interest and no transfer of any of the shares held by the member shall be registered unless the member is not himself in default in supplying the information requested and the transfer is part only of the member's holding and is accompanied by a certificate given by the member in a form satisfactory to the Directors to the effect that after due and careful enquiry the member is satisfied that no person in default is interested in any shares subject to the transfer or the transfer is an approved transfer. No restrictions will prevent dealings taking place on an open and proper basis.

Any restriction notice shall have effect in accordance with its terms until not more than seven days after the Directors are satisfied that the default in respect of which the restriction notice was issued no longer continues but shall cease to have effect in relation to any shares which are transferred by such member by means of a permitted or approved transfer on receipt by the Company of notice that a transfer as aforesaid has been made. The Company may (at the absolute discretion of the Directors) at any time give notice to the member cancelling, or suspending for a stated period the operation of, a restriction notice in whole or in part.

# (c) Variation of Class Rights and Alteration of Capital

- If at any time the share capital of the Company is divided into different classes of shares, the rights attached to any class of shares may, subject to the Act and any other act relating to companies (the "Statutes"), be modified, abrogated or varied either with the consent in writing of the holders of three-fourths of the issued shares of that class or with the sanction of an extraordinary resolution passed at a separate general meeting of the holders of the shares of that class. To every such separate general meeting the provisions of sections 369, 370, 376 and 377 of the Act and the provisions of the Articles relating to general meetings shall apply, mutatis mutandis, but so that the necessary quorum at any such meeting other than an adjourned meeting shall be two persons holding or representing by proxy at least one-third in nominal value of the issued shares of the relevant class and at an adjourned meeting one person holding shares of the class or his proxy. Any holder of shares of the relevant class present in person or by proxy may demand a poll upon which every holder of shares of that class shall be entitled to one vote for every such share held by him. The rights attached to any class of shares shall, unless otherwise expressly provided by the terms of issue of such shares or by the terms upon which such shares are for the time being held, be deemed not to be modified, abrogated or varied by the creation or issue of further shares ranking pari passu therewith.
- (ii) The Company may by ordinary resolution increase its share capital, consolidate all or any of its share capital into shares of larger amount, sub-divide all or any of its shares into shares of smaller amount and cancel any shares which at the date of the passing of the resolution have not been taken or agreed to be taken by any person.
- (iii) Subject to the provisions of the Statutes, the Company may by special resolution reduce its share capital, any capital redemption reserve and any share premium account in any way.
- (iv) Subject to the provisions of the Statutes and subject to any provisions contained in the Articles from time to time, all unissued shares of the Company are at the disposal of the Directors.
- (v) Subject to the provisions of the Statutes, any shares may be issued on terms that they are redeemed or liable to be redeemed at the option of the Company or the shareholders on the terms and in the manner provided for by the Articles.
- (vi) Subject to the provisions of the Statutes, the Company may purchase its own shares (including any redeemable shares).

# (d) Transfer of Shares

(i) Subject to paragraph (d)(ii) below, the instrument of transfer of a certificated share shall be signed by or on behalf of the transferor (and, in the case of a share which is not fully paid, by or on behalf of the transferee) and the transferor shall be deemed to remain the holder of the share until the name of the transferee is entered in the register in respect thereof. All transfers of certificated shares shall be effected by instrument in writing in any usual or common form or any other form which the Directors may approve. The Directors may, in their absolute discretion and without giving any reason, refuse to register the transfer of a share which is not fully paid (whether certificated or uncertificated) provided that where such shares are admitted to the Official List, such discretion may not be exercised in a way which the UK Listing Authority regards as preventing dealings in the shares of the relevant class or classes from taking place on an open and proper basis. The Directors may likewise refuse to register any transfer of a share (whether certificated or uncertificated) in favour of more than four persons jointly. In relation to certificated shares, the Directors may decline to recognise any instrument of transfer unless it is left at the registered office of the Company, accompanied by the relevant certificate and such other evidence as the Directors may reasonably require to show the right of the transferor to make the transfer,

and unless the instrument is in respect of only one class of share. The registration of transfers may be suspended by the Directors for any period (not exceeding 30 days in any year) except that, in respect of uncertificated shares, the consent of the operator of the relevant system for those shares will first be required.

(ii) Notwithstanding any other provision of the Articles to the contrary, any shares in the Company may be held in uncertificated form and title to shares may be transferred by means of a relevant system (in each case as defined in the Regulations) such as CREST.

# (e) Directors

- (i) The business of the Company shall be managed by the Directors, who may exercise all such powers of the Company subject to the provisions of the Articles and the Statutes and to such directions as may be given by the Company in general meeting by special resolution.
- (ii) Unless and until the Company in general meeting shall otherwise determine, the number of Directors shall be not more than 12 and not less than four. A Director shall not be required to hold any shares in the capital of the Company. A Director who is not a member shall nevertheless be entitled to receive notice of and attend and speak at all general meetings of the Company and all separate general meetings of the holders of any class of shares in the capital of the Company.
- (iii) No Director shall be disqualified by his office from entering into any contract, arrangement, transaction or proposal with the Company either with regard to his tenure of any other office or place of profit or acting in a professional capacity for the Company or as a seller, buyer or otherwise. Subject to the provisions of the Statutes and save as therein provided, no such contract, arrangement, transaction or proposal entered into by or on behalf of the Company in which any Director or person connected with him is in any way interested, whether directly or indirectly, shall be liable to be avoided, nor shall any Director who enters into any such contract, arrangement, transaction or proposal or who is so interested be liable to account to the Company for any profit or other benefit realised by any such contract, arrangement, transaction or proposal by reason of such Director holding that office or of the fiduciary relationship thereby established, but such Director shall declare the nature of his interest in accordance with the Statutes.
- (iv) A Director shall (in the absence of a material interest other than an interest indicated below) be entitled to vote (and be counted in the quorum) in respect of any resolution concerning any of the following matters, namely:
  - (A) the giving of any guarantee, security or indemnity in respect of money lent or obligations incurred by him or by any other person at the request of or for the benefit of the Company or any of its subsidiary undertakings;
  - (B) the giving of any guarantee, security or indemnity in respect of a debt or obligation of the Company or any of its subsidiary undertakings for which he himself has assumed responsibility in whole or in part under a guarantee or indemnity or by the giving of security;
  - (C) any proposal concerning an offer of shares in or debentures or other securities of or by the Company or any of its subsidiary undertakings for subscription or purchase in which offer he is, or may be entitled to, participate as a holder of securities or in the underwriting or sub-underwriting of which he is to participate;
  - (D) any contract, arrangement, transaction or other proposal concerning any other body corporate in which he, or any other person connected with him (within the meaning of section 346 of the Act), is interested, directly or indirectly and whether as an officer or shareholder or otherwise howsoever, provided that he or any person connected with him do not hold an interest (within the meaning of sections 198-211 of the Act) in one per cent. or more of any class of the equity share capital of such body corporate or of the voting rights available to members of the relevant body corporate;
  - (E) any contract, arrangement, transaction or other proposal which does not accord him any privilege or benefit not generally accorded to the employees to whom the proposal relates; and

- (F) any proposal concerning any insurance which the Company is to purchase and/or maintain for the benefit of Directors or for the benefit of persons who include Directors.
- (v) If any question shall arise at any meeting as to the materiality of an interest or as to the entitlement of any Director to vote and such question is not resolved by his voluntarily agreeing to abstain from voting, such question shall be referred to the Chairman of the meeting and his ruling in relation to any Director other than himself shall be final and conclusive except in a case where the nature or extent of the interests of the Director concerned have not been fairly disclosed.
- (vi) Save as provided in the Articles, a Director shall not vote or be counted in the quorum present on any motion in respect of any contract, arrangement, transaction or any other proposal in which he has an interest which (together with any interest of any person connected with him within the meaning of section 346 of the Act) is to his knowledge a material interest otherwise than by virtue of his interests in shares or debentures or other securities of, or otherwise in or through the Company.
- (vii) The Directors shall be paid out of the funds of the Company by way of fees for their services as Directors such sums (if any) as the Directors may from time to time determine (not exceeding in the aggregate an annual sum (excluding amounts payable under any other provision of the Articles) of £300,000 or such larger amount as the Company may by ordinary resolution determine). Such remuneration shall be divided between the Directors as they shall agree or, failing agreement, equally. Such remuneration shall be deemed to accrue from day to day.
- (viii) Subject to the provisions of the Statutes, the Directors, or any committee authorised by the Directors, may from time to time appoint one or more of their body to the office of managing director or to hold such executive office as they may decide for such period and on such terms as they think fit, and may revoke such appointment. The salary or remuneration of any such executive director shall, subject as provided in any contract, be such as the Directors may from time to time determine, and may either be a fixed sum of money, or may altogether or in part be governed by the business done or profits made, and may include the making of provisions for the payment to him, his widow or other dependants, of a pension on retirement from the office or employment to which he is appointed and for the participation in pension and life assurance and other benefits.
- (ix) The Directors may entrust to and confer upon a managing director or any such executive director any of the powers and discretions exercisable by them upon such terms and conditions and with such restrictions as they may think fit, and either collaterally with or to the exclusion of their own powers and discretions and may from time to time revoke, withdraw, alter or vary all or any of such powers or discretions.
- (x) Any Director who is appointed to any executive office or who serves on any committee or who devotes special attention to the business of the Company, or who otherwise performs services which, in the opinion of the Directors or any committee authorised by the Directors, are outside the scope of the ordinary duties of a Director, may be paid such extra remuneration by way of salary, percentage of profits or otherwise as the Directors may determine.
- (xi) The Directors may be paid all reasonable travelling, hotel and other expenses properly incurred by them in attending and returning from meetings of the Directors or any committee of the Directors or general meetings of the Company or otherwise in connection with the business of the Company.
- (xii) A Director may be or continue as or become a director or other officer, servant or member of, or otherwise interested in, any body corporate promoted by the Company or in which the Company may be interested as shareholder or otherwise, and no such Director shall be accountable to the Company for any remuneration or other benefits received or receivable by him as a director or other officer, servant or member of, or from his interest in, such other body corporate. Subject to the provisions of the Act, a Director may hold any other office or place of profit under the Company, except that of auditor, in conjunction with the office of Director and may act by himself or through his firm in a professional capacity for the Company, and in any such case on such terms as to remuneration and otherwise as the Directors may arrange. Such remuneration shall be in addition to any remuneration otherwise provided by the Articles.
- (xiii) Where proposals are under consideration concerning the appointment (including fixing or varying the terms of appointment) of two or more Directors to offices or employments with the Company or any body corporate in which the Company is interested, such proposals may be divided and

- considered in relation to each Director separately and in such cases each of the Directors concerned (subject to the Articles) shall be entitled to vote (and be counted in the quorum) in respect of each resolution except that concerning his own appointment.
- (xiv) Section 293 of the Act (which regulates the appointment and continuation in office of Directors who have attained the age of 70) shall apply to the Company.
- (xv) Each Director shall have the power at any time to appoint as an alternate Director either (A) another Director or (B) any other person approved for that purpose by a resolution of the Directors, and, at any time, to terminate such appointment and such appointment requires the approval of at least three quarters of all the Directors.
- (xvi) One third of the Directors shall retire from office at each general meeting of the Company, so that each Director shall retire at every third Board meeting from his last appointment. A retiring Director shall be eligible for re-election.
- (xvii) Without prejudice to the provisions of the Articles, the Directors may exercise all the powers of the Company to purchase and maintain insurance for or for the benefit of any persons who are or were at any time directors, officers, employees or auditors of the Company, or of any other body (whether or not incorporated) which is or was its parent undertaking or subsidiary undertaking or another subsidiary undertaking of any such parent undertaking (together "Group Companies") or otherwise associated with the Company or any Group Company or in which the Company or any such other Group Company has any interest, whether direct or indirect, or of any predecessor in business of any of the foregoing, or who are or were at any time trustees of, or directors of trustees of, any pension, superannuation or similar fund, employees' trust or scheme or any employees' share scheme or other scheme or arrangement in which any of the Company or any such other body is interested, including (without prejudice to the generality of the foregoing) insurance against any costs, charges, expenses, losses or liability suffered or incurred by such person in respect of any act or omission in the actual or purported execution and/or discharge of their duties and/or the exercise or purported exercise of their powers and/or otherwise in relation to or in connection with their duties, powers or offices in relation to the Company or any such other body, fund, trust, scheme or arrangement.
- (xviii) The Directors or any committee authorised by the Directors may exercise all the powers of the Company to give or award pensions, annuities, gratuities or other retirement superannuation, death or disability allowance or benefits to, *inter alia*, any Directors, ex-directors, employees or exemployees of the Company or of any subsidiary undertaking or parent undertaking of the Company or to the wives, widows, children, other relations and dependants of any such person and may establish, maintain, support, subscribe to and contribute to all kinds of schemes, trusts and funds for the benefit of any such persons.

# (f) Borrowing Powers

- (i) The Directors may, save as the Articles otherwise provide, exercise all the powers of the Company to borrow money and to mortgage or charge its undertaking, property, assets and uncalled capital, or any part thereof, and, subject to the provisions of the Statutes and the Articles, to issue debentures, debenture stock and other securities whether outright or as security for any debt, liability or obligation of the Company or of any third party.
- (ii) The Directors shall restrict the borrowings of the Company and exercise all voting and other rights or powers of control exercisable by the Company in relation to its subsidiary undertakings (if any) so as to secure (so far, as regards subsidiary undertakings, as by such exercise they can secure) that the aggregate amount for the time being remaining outstanding of all monies borrowed by the Company and any subsidiary undertakings for the time being (in this paragraph, the "Group") and for the time being owing to persons outside the Group shall not at any time, without the previous sanction of an ordinary resolution of the Company in general meeting, exceed a sum equal to £10,000,000.

# (g) Dividends and Distributions on Liquidation to Shareholders

(i) The Company in general meeting may declare dividends, but no dividend shall exceed the amount recommended by the Directors. Subject to any priority, preference or special rights, all dividends shall be declared and paid according to the amounts paid up on the shares and shall be

- apportioned and paid proportionately to the amounts paid up on the shares during any portion of the period in respect of which the dividend is paid.
- (ii) The Directors may pay such interim dividends as they think fit and may pay the fixed dividends payable on any shares of the Company half-yearly or otherwise on fixed dates.
- (iii) No dividend or interim dividend shall be paid otherwise than in accordance with the provisions of the Statutes.
- (iv) On a liquidation, the liquidator may, with the sanction of an extraordinary resolution of the Company and any other sanction required by the Statutes, divide amongst the members in specie or in kind the whole or any part of the assets of the Company and may, for such purpose, set such value as he deems fair upon any property to be divided and may determine how such division shall be carried out.
- (v) The Directors may, with the sanction of an ordinary resolution of the Company in general meeting, offer the holders of Ordinary Shares the right to elect to receive New Ordinary Shares credited as fully paid instead of cash in respect of the whole or part of any dividend.
- (vi) Any dividend unclaimed for a period of 12 years after it became due for payment shall be forfeited and shall revert to the Company.

## 7. SHARE OPTIONS

Options over Ordinary Shares have been granted to date under four share option plans, the Ark Therapeutics Limited 2001 Enterprise Management Incentive Share Option Plan (the "2001 EMI Plan"), the Ark Group Limited 2003 Enterprise Management Incentive Share Option Plan (the "2003 EMI Plan, together with the 2001 EMI Plan, the "EMI Plans"), the Ark Therapeutics Limited Share Option Plan (the "Old Executive Plan") and the Ark Group Unapproved Share Option Plan (the "Unapproved Executive Plan"). No further grants will be made under the Old Executive Plan or the 2001 EMI Plan. Following Admission, employees and executive Directors will be eligible to participate in the Unapproved Executive Plan and the Ark Group Approved Share Option Plan (the "Approved Executive Plan" and together with the Unapproved Executive Plan the "Executive plans"), the terms of which have been updated and revised to comply with guidelines and best practice governing the grant of share-based incentives in a listed company, to the extent to which the Board considers such practice to be appropriate to the Group. Employees and executive Directors may also receive further options under the 2003 EMI Plan although immediately following Admission Ark will not be a qualifying company for the purposes of schedule 5 of the Income Tax (Earnings and Pensions) Act 2003 ("ITEPA"). Further options under the 2003 EMI Plan may be granted if the Company regains its qualifying status.

Non-executive Directors are granted options by separate agreement and details are set out in paragraph 7.4 below.

All outstanding options are over Ordinary Shares (with the exception of those highlighted in paragraph 7.2 below) and any Ordinary Shares issued or transferred in satisfaction of any option shall rank *pari passu* with the then existing issued Ordinary Shares. Benefits under any of the Share Option Plans or options detailed below are not pensionable.

## 7.1 The EMI Plans

Options granted under the EMI Plans are subject to the following terms:

# (a) Administration

Options qualify for tax-favoured treatment pursuant to Schedule 5 of ITEPA. Responsibility for the operation of the EMI Plans is delegated by the Board to a duly appointed committee of the Board (the "Committee").

# (b) Eligible Employees

Only full-time Directors and employees whose committed time amounts to at least 25 hours per week (or if less than 25 hours per week, not less than 75 per cent. of his working time) qualify for options under the EMI Plans.

## (c) Grant of Options

Following Admission options under the 2003 EMI Plan will only be granted during the period of 42 days following the preliminary announcement of the annual or half-yearly results of the Company for the financial period, or at any other time if the Committee in its absolute discretion determines that the circumstances are sufficiently exceptional to justify the grant of an option.

#### (d) Individual Limit

The Committee may grant options under the 2003 EMI Plan to an eligible employee over such number of Ordinary Shares as it determines, subject to a limit of £100,000 per individual and an overall limit of £3,000,000. No option may be granted under the 2003 EMI Plan after Admission if, as a result, the aggregate market value of Ordinary Shares subject to options granted under all employees' share plans adopted by the Company to that participant during that financial year would exceed twice basic salary, although this limit may be exceeded in exceptional circumstances.

## (e) Company Limit

No option over Ordinary Shares may be granted on any date if, as a result, the total nominal value of Ordinary Shares issued or issuable pursuant to options granted after Admission under the 2003 EMI Plan, when aggregated with Ordinary Shares issued or issuable pursuant to options and other rights granted after Admission under all employees' share plans adopted by the Company, would exceed ten per cent. of the issued ordinary share capital of the Company.

## (f) Exercise Price

The exercise price shall be determined by the Committee. Following Admission it will not be less than the higher of the market value of an Ordinary Share at the date of grant, as determined from the daily official list of the London Stock Exchange, and the nominal value of an Ordinary Share.

## (g) Exercise of Options

Options granted to date under the EMI Plans vest and become exercisable in equal annual tranches over periods of either three or four years beginning on the first anniversary of grant.

In normal circumstances, options will remain exercisable until the tenth anniversary of the date of grant.

Options will become exercisable in full in the event of the participant's death, his suffering injury or disability, retirement or redundancy. On the transfer out of the Group of the participant's employing company or business or on his leaving in any other circumstances, unvested options are exercisable at the absolute discretion of the Board. Options will generally lapse if participants cease to be employed by the Company by reason of dismissal or voluntary resignation. Options may also be exercised on the occurrence of certain "disqualifying events", within the meaning of schedule 5 of ITEPA, at the discretion of the Board. In the event of a takeover of the Company, options may be exercised to the extent vested (subject to the Board's discretion to accelerate vesting) or released in exchange for equivalent options over the acquiring company.

Participants granted options under the EMI Plans have agreed to pay any secondary employers' national insurance which may arise on an exercise in circumstances where tax relief is not available.

Any further options granted under the 2003 EMI Plan following Admission will be granted subject to exercise terms and conditions which the Committee consider to be appropriate in the context of best practice for a listed company.

### (h) Variation of Share Capital

On any variation of the ordinary share capital of the Company by way of capitalisation or rights issue or by consolidation, sub-division or reduction of capital or otherwise, the Board may make such adjustments as it considers appropriate to the exercise price and/or the number of Ordinary Shares comprised in an option.

## (i) Amendments

The rules of the EMI Plans may be modified by the Board. The Board shall ensure that no amendment to the EMI Plans to the material advantage of participants shall be made without the prior approval of Shareholders in general meeting. No amendment may be made if such amendment would abrogate or adversely alter any of the existing rights of a participant, without the prior consent of that participant.

# 7.2 Options granted prior to Admission under the Old Executive Plan and the Unapproved Executive Plan

Options granted under the Old Executive Plan were originally granted over shares in Ark Therapeutics Limited. The majority of these were rolled over into options over Ordinary Shares as part of a pre-Admission reorganisation but non-UK residents and consultants for whom rollover may have had adverse tax effects kept options over Ark Therapeutics Limited ordinary shares. Where such individuals have elected to keep options over shares in Ark Therapeutics Limited, the Company has agreed to exchange shares in Ark Therapeutics Limited for Ordinary Shares in the Company on a one-for-one basis following exercise. Options granted to date under the Old Executive Plan and the Unapproved Executive Plan, are subject to the following key terms:

### (a) Participants

Options have been granted to employees and Directors of the Company and options have also been granted to consultants.

#### (b) Exercise Price

Options have been granted subject to exercise prices ranging from £0.60 per share to £1.48 per share (£0.30 per share to £0.74 assuming the Capital Reorganisation has taken place).

## (c) Exercise

Options vest and become exercisable in equal annual tranches over a period of three or four years beginning on the first anniversary of grant.

In the case of options granted by separate deed (as shown in paragraph 5.10 above, as "Option Deeds"), such options will vest fully on Admission. The Management Options granted in February 2004 shall be capable of vesting up to 50 per cent. 12 months following Admission and a further 25 per cent. on each of the days falling 18 months and 24 months following Admission and the number of shares which may be acquired on each vesting occasion will be determined by a formula which takes account of the Company's share price at that time, with the maximum number vesting if the share price is £2.19 or more.

In normal circumstances, options will remain exercisable until the tenth anniversary of the date of grant.

Options will become exercisable in full in the event of the participant's death, his suffering injury, disability, retirement or redundancy. On the transfer out of the Group of the participant's employing company or business or on his leaving in any other circumstances, unvested options are exercisable at the absolute discretion of the Board. Options will generally lapse if participants cease to be employed by the company by reason of dismissal or voluntary resignation. In the event of a takeover of the Company, options may be exercised to the extent vested (subject to the Board's discretion to accelerate vesting) or released in exchange for equivalent options over the acquiring company.

UK participants granted options on or after 23 May 2001 have agreed to pay any secondary employer's national insurance which may arise on exercise.

# (d) Variation of share capital

On any variation of the ordinary share capital of the Company by way of capitalisation or rights issue or by consolidation, sub-division or reduction of capital or otherwise, the Board may make such adjustments as it considers appropriate to the exercise price and/or the number of Ordinary Shares comprised in an option.

## (e) Amendments

The Board has a wide power of amendment under the plans, but following Admission shall ensure that amendments to the material advantage of participants shall be made only with the prior approval of Shareholders in general meeting.

# 7.3 The Approved Executive Plan and the Unapproved Executive Plan (together the "Executive Option Plans")

Following Admission employees and executives will be eligible to participate in the Executive Option Plans which are subject to the same key terms, except as highlighted below.

The Executive Option Plans are administered and operated by the Remuneration Committee (the "Committee") of the Company.

The Executive Option Plans were adopted by the Board on 17 April 2002. The Company intends to apply for Inland Revenue approval to the Approved Executive Plan in accordance with ITEPA schedule 4.

Except in exceptional circumstances such as recruitment, the Committee does not intend to grant any further options under the Executive Option Plans until after the announcement of the Company's results for the financial year ending 31 December 2004.

## (a) Eligible Employees

Options over Ordinary Shares may be granted at the discretion of the Committee to any employee (including an executive Director) of any member of the Group who devotes substantially the whole of his working time to the Group and in the case of a director not less than 25 hours per week.

## (b) Grant

Options under the Executive Option Plans may only be granted during the period of 42 days following the preliminary announcement of final or interim results for any period.

#### (c) Individual Limits

Under the Approved Executive Plan no option may be granted to any individual at any time if, as a result the aggregate market value of Ordinary Shares issuable pursuant to options and other rights granted to him under the Approved Plan would exceed £30,000 or, when aggregated with options which remain outstanding under the EMI Plans, would exceed £100,000.

No option may be granted under either of the Executive Option Plans if, as a result, the aggregate market value of Ordinary Shares subject to options granted under all employees' share plans adopted by the Company to that participant during that financial year would exceed twice his basic salary, although this limit may be exceeded in exceptional circumstances.

# (d) Overall Limits

No options to subscribe for Ordinary Shares shall be granted on any date if, as a result the total nominal value of Ordinary Shares issued or issuable pursuant to options or other rights granted during the previous ten years but after Admission under the Executive Option Plans and all other employees' share plans established by the Company would exceed ten per cent. of the issued ordinary share capital of the Company from time to time.

# (e) Exercise Price

The exercise price of an option shall be determined by the Board, and shall not be less than the higher of the market value of an Ordinary Share at the date of grant, as determined from the daily official list of the London Stock Exchange and the nominal value of an Ordinary Share.

## (f) Exercise and Lapse of Options

Options will not normally be exercisable prior to the third anniversary of grant and the extent of exercise will be conditional on the achievement of appropriate objective performance conditions determined at grant by the Committee having regard to best practice and the interests of the

Company. In the case of Directors and senior managers, objective conditions will relate to overall group financial performance and in the case of other employees may relate to relevant departmental milestones. In normal circumstances, options may be exercised, to the extent vested, until the tenth anniversary of the date of grant.

Options will become exercisable in full in the event of the participant's death, his suffering injury or disability or retirement. On the transfer out of the Group of the participant's employing company or business or on his leaving in any other circumstances, unvested options are exercisable at the absolute discretion of the Board. Options will generally lapse if participants cease to be employed by the Group by reason of dismissal or voluntary resignation. In the event of a takeover of the Company, options may be exercised early to the extent that the performance condition (adjusted by the Committee to reflect the extent to which the performance period remains unexpired) is met or released in exchange for equivalent options over the acquiring company.

## (g) Alterations of Share Capital

In the event of any variation in the ordinary share capital of the Company, such adjustments to the number of Ordinary Shares subject to options and the exercise price may be made as are fair and reasonable subject in the case of the Approved Executive Plan only to the agreement of the Inland Revenue.

# (h) Voting, Dividend and Other Rights

Until options are exercised, participants have no voting or other rights in respect of the Ordinary Shares subject to their options. Options are not assignable or transferable and benefits obtained under the Executive Option Plans are not pensionable.

Shares issued pursuant to the Executive Option Plans shall rank pari passu in all respects with the Ordinary Shares already in issue except that they will not rank for any dividend or other distribution paid or made by reference to a record date falling prior to the date of exercise of the option.

#### (i) Administration and Amendment

The Executive Option Plans are administered by the Committee and may be amended by resolution provided that no amendment may be made which would disadvantage participants without their consent. The consent of Shareholders in general meeting will be sought for changes to the material benefit of participants.

At any time at which the Approved Executive Plan is intended to remain Inland Revenue-approved, no amendment shall have effect to any key feature of the plan without the prior consent of the Inland Revenue.

# (j) Termination

The Executive Option Plans may be terminated at any time by resolution of the Board or of the Company in general meeting but in any event the Unapproved Executive Plan will terminate on 17 April 2012 and the Approved Plan will terminate on the tenth anniversary following the plan's approval by the Inland Revenue. Termination shall not affect the outstanding rights of participants.

## 7.4 Options Granted to Non-Executive Directors

It is the current policy of the Company to grant Non-executive Directors share options as part of their remuneration package. The Non-executive Directors are not eligible to participate in the Executive Option Plans and options are granted to them under separate agreement on terms summarised below.

Options will become exercisable to the extent vested, which is dependent only on the Non-executive Director remaining with the Company. Options granted following Admission will vest as to one third annually on the first, second and third anniversary of grant provided the Director has remained with the Company. Any element of an unvested option will lapse on the Director ceasing to hold office with the Company on the same terms as options granted under the Executive Option Plans.

In the event of a takeover or change of control of the Company options will only be exercisable to the extent vested.

The exercise price payable for the acquisition of shares on exercise of an option is determined by the Board and will not normally be less than the market value of the Company's shares on the date of grant. However, in the case of options which may be granted to two additional Non-executive Directors who are expected to be appointed after Admission, the initial options granted to them will have an exercise price equal to the Offer Price. Details of options granted to Dennis Turner, Sir Mark Richmond, Peter Keen and Dr Wolfgang Plischke prior to Admission (including vesting terms) are set out in paragraph 9.2.

With respect to the timing of grants, overall limits, alterations in share capital, voting, dividends and other rights and amendments, options granted to Non-executive Directors are subject to the same terms as options granted under the Executive Option Plans.

## 8. PENSION ARRANGEMENTS

The Group pays contributions of between 7.5 and 10 per cent. of salary to personal pension plans taken out by employees. The upper limit will rise to 12.5 per cent. from Admission.

## 9. DIRECTORS' AND OTHER INTERESTS

- 9.1 The interests of the Directors and their immediate families (all of which are beneficial unless otherwise stated) in the issued share capital of the Company which:
  - (a) have been notified by each Director pursuant to section 324 or section 328 of the Act;
  - (b) are required pursuant to section 325 of the Act to be entered into the register referred to therein; or
  - (c) are interests of a connected person (within the meaning of section 346 of the Act) of a Director which would, if the connected person were a Director, be required to be disclosed under paragraph 9.1(a) or (b) above and the existence of which is known to or could with reasonable diligence be ascertained by that Director,

were as at 2 March 2004 (being the latest practicable date prior to the printing of this document) and will be, immediately following Admission, as follows and in 9.2 below:

	Current		Immediately following Admission	
Director	Number of Ordinary Shares	Percentage of existing issued share capital	Number of Ordinary Shares <sup>(1)</sup>	Percentage of issued share capital (4)
Dennis Turner	40,541	0.10	96,002	0.08
Nigel Parker <sup>(2)(3)</sup>	1,263,514	3.12	2,886,667	2.29
Seppo Ylä-Herttuala	2,216,179	5.48	4,352,358	3.44
Martyn Williams <sup>(3)</sup>	270,135	0.67	543,398	0.43

<sup>(1)</sup> Assuming the Capital Reorganisation has taken place.

- (2) 13,514 Ordinary Shares included in respect of Nigel Parker are 'B' Ordinary Shares of 0.02 pence each held in trust for members of Nigel Parker's immediate family, in the name of Brecon Holdings Limited, which, assuming the conversion of the 'B' Ordinary Shares into Ordinary Shares and the Capital Reorganisation have taken place, equates to 32,002 Ordinary Shares of 1 pence each.
- (3) 1,250,000 Ordinary Shares included in respect of Nigel Parker and 250,000 Ordinary Shares included in respect of Martyn Williams are Management Shares held in the name of Walbrook Trustees (Guernsey) Limited, the trustee of the Family Benefit Trust. Simultaneously with and upon Admission, these will be redeemed by the Company and in their place there will be issued to Walbrook Trustees (Guernsey) Limited 2,854,665 Ordinary Shares of I pence each in respect of Nigel Parker and 495,639 Ordinary Shares of I pence each in respect of Martyn Williams (assuming in both cases that the Capital Reorganisation has taken place).
- (4) Assuming the Over-Allotment Option is not exercised.
- 9.2 The following options over Ordinary Shares have been, or will prior to Admission be, granted to the Directors under the Share Option Plans described in paragraph 7 above, or otherwise by separate agreement, such options being exercisable at the price and between the dates shown below. These details assume that the Capital Reorganisation has taken place and appropriate adjustments have been made to the exercise price and number of shares under option.

Directors	Plan <sup>i</sup>	Date of Grant	No. of Shares Under Option	Exercise Price £ €	Vesting Period <sup>(4)</sup>	Expiry Date	<u>Total</u>
Dennis Turner <sup>3</sup>		Dec-99	400,000	0.50	Fully vested	5-Dec-2009	
Dennis Turner		Apr-00	170,000	0.50	Fully vested	24-Apr-2010	
		May-01	120,000	0.69	Fully vested	23-May-2011	
		Jan-04	150,000	0.605	28/01/2005-28/01/2007	27-Jan-2014	840,000
Peter Keen <sup>2</sup>		May-01	120,000	0.69	Fully vested	23-May-2011	,
		Feb-04	150,000	0.605	06/02/2005-06/02/2007	5-Feb-2014	270,000
Sir Mark Richmond <sup>3</sup>		May-01	120.000	0.69	Fully vested	23-May-2011	,
		Jan-04	150,000	0.605	28/01/2005-28/01/2007	27-Jan-2014	270,000
Nigel Parker		Sep-98 <sup>(5</sup>		0.0001	Sale or Listing	31-Aug-2008	,
		Apr-00 <sup>(5</sup>		0.0001	Sale or Listing	24-Apr-2010	
		Apr-00 <sup>(5</sup>		0.50	Sale or Listing	24-Apr-2010	
	Unapproved	May-01	142,290	0.69	24/05/2002-24/05/2005	23-May-2011	
	EMI	May-01	285,710	0.69	24/05/2002-24/05/2005	23-May-2011	
	Unapproved	Mar-02	400,000	0.74	21/03/2003-21/03/2006	20-Mar-2012	
	Unapproved	Sep-03	350,000	0.50	24/09/2004-24/09/2007	23-Sep-2013	
	Unapproved	Jan-04	400,000	0.605	28/01/2005-28/01/2008	27-Jan-2014	
	Unapproved	Feb-04	$500,000^{(6)}$	0.605	On second anniversary	Feb-2014	3,846,808
					of Admission		
Martyn Williams		Dec-99 <sup>(5)</sup>	300,000	0.30	Sale or Listing	5-Dec-2009	
•		Apr-00 <sup>(5)</sup>	150,000	0.50	Sale or Listing	24-Apr-2010	
	Unapproved	Apr-00	150,000	0.50	25/04/2001-25/04/2004	24-Apr-2010	
	EMI	May-01	200,000	0.69	24/05/2002-24/05/2005	23-May-2011	
	Unapproved	Mar-02	145,458	0.74	21/03/2003-21/03/2006	20-Mar-2012	
	EMI	Apr-02	54,542	0.74	04/04/2003-04/04/2006	3-Apr-2012	
	Unapproved	Sep-03	180,000	0.50	24/09/2004-24/09/2007	23-Sep-2013	
	Unapproved	Jan-04	180,000	0.605	28/01/2005-28/01/2008	27-Jan-2014	
	Unapproved	Feb-04	90,000 <sup>(6)</sup>	0.605	08/03/2005-08/03/2007	Feb-2014	1,450,000
Seppo Ylä-							
Herttuala <sup>3</sup>		Apr-00	70,000	0.50	25/04/2001-25/04/2004	24-Apr-2010	
		Mar-02	60,000	0.74	21/03/2003-21/03/2006	20-Mar-2012	
		Sep-03	50,000	0.50	24/09/2004-24/09/2007	23-Sep-2013	
		Jan-04	50,000	0.605	28/01/2005-28/01/2008	27-Jan-2014	230,000
Wolfgang Plischke <sup>3</sup>		Feb-04	150,000	0.605	28/01/2005-28/01/2007	27-Jan-2014	150,000
						Total	7,056,808

All options were granted for nil consideration.

<sup>(1) &</sup>quot;Unapproved" comprises options granted under the Old Executive Plan and the Unapproved Executive Plan as defined in paragraph 7 of this Part X. "EMI" comprises options granted under the EMI Plans as defined in paragraph 7 of this Part X.

<sup>(2)</sup> Peter Keen holds the 120,000 options granted in May 2001 on trust for Merlin General Partner Limited, as general partner of the Merlin Fund L.P.

<sup>(3)</sup> Options held by Non-executive Directors are granted by separate agreement and not under the Executive Option Plans, details of these options are set out in paragraph 7 of Part X of this document.

<sup>(4)</sup> Options vest annually in equal tranches of one-third or one-quarter beginning and ending on the dates shown, with the exception of Management Options whose vesting terms are described in paragraph 7.2(c) above.

<sup>(5)</sup> Granted by individual deed and exercisable from Admission.

<sup>(6)</sup> The number of shares indicated assumes that the Company's share price is £6.00 or more per Ordinary Share at the time of the second anniversary of Admission (see paragraph 7.2(c) above), and is therefore the maximum number of shares subject to these Management Options.

<sup>9.3</sup> Save as set out in paragraphs 9.1 and 9.2 above, following the Offer no Director or connected person of a Director will have any interest in the share capital of the Company or any of its subsidiaries.

<sup>9.4</sup> As at 2 March 2004 (being the latest practicable date prior to the printing of this document), in so far as is known to the Company, the following persons (in addition to those disclosed at paragraph 9.1 above) were interested, directly or indirectly, in three per cent. or more of the issued share capital of the Company:

	Current		Immediately following Admission	
Shareholder	Number of Ordinary Shares	Percentage of issued share capital	Number of Ordinary Shares <sup>(1)</sup>	Percentage of issued share capital <sup>(6)</sup>
The Merlin Fund L.P. (2)	6,866,145	16.98	13,732,290	10.87
Nomura International plc	5,689,189	14.07	12,000,000	9.50
TVM IV GmbH and Co. KG	3,675,676	9.09	7,600,000	6.01
Bio Fund Ventures II Ky	3,351,351	8.29	7,200,000	5.70
Merlin Equity Limited <sup>(3)</sup>	2,281,497	5.64	4,562,994	3.61
Concordia Investor I Kb <sup>(4)</sup>	2,229,729	5.51	4,666,665	3.69
Jukka Luoma <sup>(5)</sup>	1,711,180	4.23	3,360,360	2.66
BankInvest	1,689,189	4.18	4,000,000	3.17
The Merlin Biosciences Fund L.P. (2)	1,593,429	3.94	3,773,240	2.99
UCL Cruciform Limited	1,499,995	3.71	2,999,990	2.37
Gartmore Investment Management	1,351,351	3.34	3,200,000	2.53
Concordia Investor II Kb <sup>(4)</sup>	445,947	1.10	933,336	0.74
The Merlin Biosciences Fund GbR <sup>(2)</sup>	95,760	0.24	226,760	0.18

<sup>(1)</sup> Assuming that the Capital Reorganisation has taken place.

Save as set out in this paragraph and in paragraph 9.1, the Company is not aware of any person who is interested, directly or indirectly, in three per cent. or more of the issued share capital of the Company.

- 9.5 The Company is not aware of any person who exercises, or could exercise, directly or indirectly, jointly or severally, control over the Company.
- 9.6 No Director has or has had any interest in any transaction which is or was unusual in its nature or conditions or is or was significant to the business of the Group and which was effected by any member of the Group during the current or immediately preceding financial year or during any earlier financial year and remains in any respect outstanding or unperformed.

# 9.7 The Directors, Alan Boyd and Paul Higham:

(a) are or have been directors or partners of the following companies and partnerships at any time in the previous five years:

Director	Company/Partnership	Position still held
D. Turner	Ibex Telecoms, Inc	Yes
	Central Asia Energy Company	Yes
	Kurasu Development Company	Yes
	Interseason Limited	Yes
	Anderton Global Energy, Inc.	Yes
	lbex Card Services Inc.	Yes
	PERQ/HCI Corp.	No
	Pharmaceutical Marketing Services, Inc.	No
	International Biotechnology Trust plc	No
	Medical Information and Broadcasting Limited	No
	InnerDoorway, LLC/Inner Doorway.Com	No

<sup>(2)</sup> The Merlin funds listed are all advised by Merlin Biosciences Limited. Their shares are held by the general partner of the respective fund.

<sup>(3)</sup> Merlin Equity Limited has entered into put and call arrangements in respect of 2,000,005 ordinary shares (assuming the Capital Reorganisation has not yet taken place) in the Company with a company under common ownership with its parent company, Merlin Ventures Limited. Exercise of these arrangements is subject to the lock in arrangements described in Part IX — "Details of the Offer".

<sup>(4)</sup> Concordia Investor I Kb and Concordia Investor II Kb have a common parent company.

<sup>(5)</sup> Jukka Luoma's current interest in the Company includes 506,124 Ordinary Shares (1.25 per cent. of the existing share capital assuming the Capital Reorganisation has not yet taken place) held by Leena Luoma.

<sup>(6)</sup> Assuming the Over-Allotment Option is not exercised.

Director	Company/Partnership	Position still held
N. Parker	FRH Parker and Son FRH Parker and Son Limited Enstart Patient Plus Ltd. MW Microwave, Inc.	Yes Yes Yes Yes No
	Teva Pharmaceuticals BV	No
M. Williams	Synavant UK Limited	No
M. Richmond	Cancer Research Campaign Technology Limited Targeted Genetics Corporation Paratek Pharmaceuticals, Inc. Phogen Limited Cytos AG Genentech Corporation Cancer Research Ventures Ltd. OSI Corporation Sosei Co., Ltd Whittington NHS Hospital Trust UCL Cruciform Limited	No Yes Yes No Yes Yes No Yes No Yes No Yes No
	Core Group plc	No
	Cyclacel Limited Axxima GmbH	No No
P. Keen	Arakis Limited Finsbury Life Sciences Investment Trust plc Merlin Equity Limited Microscience Limited Spectrum General Partner Limited Vectura Limited Amedis Pharmaceuticals Limited BioVex Limited Cyclacel Limited Intercytex Limited Merlin Biosciences Limited Pan'Therix Limited ReNeuron Holdings plc Vision Homes Limited (Dormant) Enviros Limited KinderTec Limited LiDCO Limited Market Movements Limited Merlin Ventures Limited None	Yes Yes Yes Yes Yes Yes Yes No
		Voc
W. Plischke	Bayer Healthcare AG Bayer Plc Generics Holdings GmbH Bayer Pharmaceuticals Corp. Bayer Yakuhln Limited	Yes Yes Yes Yes Yes
A. Boyd	Ark Therapeutics Oy	Yes
P. Higham	Ark Therapeutics Oy	Yes

- (b) have no unspent convictions relating to indictable offences;
- (c) have had no bankruptcies or individual voluntary arrangements;
- (d) have not been directors with an executive function of any company at the time of or within 12 months preceding any receivership, compulsory liquidation, creditors' voluntary liquidation,

- administration, company voluntary arrangement or any composition or arrangement with creditors generally or any class of creditors of such company;
- (e) have not been partners of any partnership at the time of or within 12 months preceding any compulsory liquidation, administration or partnership voluntary arrangements of such partnership;
- (f) have not been partners of any partnership at the time of or within 12 months preceding a receivership of any assets of such partnership;
- (g) have not had any of their assets subject to any receivership; and
- (h) have not received any public criticisms by statutory or regulatory authorities (including designated professional bodies) and have not been disqualified by a court from acting as a director of a company or from acting in the management or conduct of the affairs of a company.

# 10. DIRECTORS' AND FOUNDERS' SERVICE AGREEMENTS AND TERMS OF APPOINTMENT

- 10.1 The following service agreements have been entered into between the Company and the relevant Director:
  - (a) an agreement dated 2 March 2004 under which Dr Nigel Parker agrees to act as the Chief Executive Officer of the Company. The agreement is terminable upon not less 12 months' notice by the Company or not less than 12 months' notice by Dr Parker. Dr Parker's agreement provides for an annual salary of £250,000, a car allowance of £12,000 per annum, life assurance, permanent health insurance and private medical insurance for himself and his immediate family. Dr Parker is eligible to receive a bonus of up to 40 per cent. of his basic salary. The Company will pay pension contributions of two times Dr Parker's contributions up to a maximum of 12.5 per cent. of gross salary into Dr Parker's personal pension plan. The service agreement contains a salary in lieu of notice clause; and
  - (b) an agreement dated 16 February 2004 under which Mr Martyn Williams agrees to act as the Chief Financial Officer of the Company. The agreement is terminable upon not less than 12 months' notice by the Company or not less than six months' notice by Mr Williams. Under the agreement, Mr Williams is entitled to an annual salary of £165,000, a car allowance of £10,000 per annum, life assurance, permanent health and private medical insurance for himself and his immediate family. Mr Williams is eligible to receive a bonus of up to 35 per cent. of his basic salary. The Company will pay pension contributions of two times Mr William's contributions up to a maximum of 12.5 per cent. of gross salary into Mr Williams' personal pension plan. The service agreement contains a salary in lieu of notice clause.
- 10.2 Save as set out in paragraph 10.1 above, there are no existing or proposed service contracts between the Directors and any member of the Group other than contracts expiring or determinable by the employing company without payment of compensation (other than statutory compensation) within one year.
- 10.3 The following agreements have been entered into, between the Company and the relevant Director:
  - (a) an agreement dated 2 March 2004 under which Professor Seppo Ylä-Herttuala agrees to act as a consultant and a letter of appointment dated 17 February 2004 under which Professor Seppo Ylä Herttuala agrees to act as a Non-executive Director of the Company. The consultancy agreement is for a fixed term until January 2006 after which it is terminable upon not less six months' notice by either party and the non-executive agreement is terminable upon not less than three months' notice. Professor Ylä-Herttuala currently receives an annual fee of £58,000 in respect of his consultancy services and £2,000 in respect of his non-executive duties. Under the consultancy agreement he is to provide his services to the Company for up to 60 days per year. The consultancy agreement provides that all intellectual property which is created in the course of his duties under the consultancy agreement will remain the property of the Company;
  - (b) a letter of appointment dated 5 February 2004 under which Dennis Turner agrees to act as a Non-executive Director of the Company. The appointment is for an indefinite term terminable upon not less three months' notice by either party. Dennis Turner currently receives an annual fee of £50,000 in respect of his duties as Chairman;
  - (c) a letter of appointment dated 2 February 2004 under which Peter Keen agrees to act as a Non-executive Director of the Company. The appointment is for an indefinite term terminable by not

- less than three month's notice by either party. Peter Keen currently receives an annual fee of £20,000 in respect of his non-executive duties;
- (d) a letter of appointment dated 2 February 2004 under which Sir Mark Richmond agrees to act as Non-executive Director of the Company. The appointment is for an indefinite term terminable upon not less than three months' notice by either party. Sir Mark Richmond receives an annual fee of £20,000 in respect of his Board duties and an annual fee of £7,500 for chairing the Remuneration Committee and £2,500 for chairing the Nomination Committee;
- (e) a letter of appointment dated 2 February 2004 under which Dr Wolfgang Plischke agrees to act as Non-executive Director of the Company. The agreement is for an indefinite term and terminable upon not less than three months' notice by either party. Under the agreement, Dr Wolfgang Plischke receives an annual fee of £20,000 in respect of his non-executive duties; and
- (f) the Non-executive Directors are eligible for an attendance allowance of £1,000 for attending relevant Board meetings and £500 for attending relevant sub-committee meetings.
- 10.4 There are no outstanding loans granted by any member of the Group to any Director nor has any guarantee been provided by any member of the Group for their benefit.
- 10.5 In the year ended 31 December 2003, the total aggregate of the remuneration paid and benefits in kind granted (under any description whatsoever) to the Directors by members of the Group was £653,868. The aggregate of the remuneration payable (including benefits in kind and the cumulative bonus of not exceeding 0.5% of funds raised as referred to in paragraph 11 below) to the Directors by members of the Group in respect of the year ending 31 December 2004 under the arrangements in force at the date of this document is expected to amount to approximately £859,592.
- 10.6 The Remuneration Committee's policy on the remuneration of executive Directors is directed at the retention and motivation of executive Directors by ensuring that their remuneration is competitive with companies within the sector whilst taking into account the interests of Shareholders.
- 10.7 There is no arrangement under which any Director has waived or agreed to waive future emoluments nor has there been any waiver of emoluments during the financial year immediately preceding the date of this document.
- 10.8 The following consultancy agreements have been entered into between Ark Therapeutics Limited and each of Professor John Martin and Dr Stephen Barker, both founders of the Company:
  - (a) an agreement dated 23 December 2003 with Ark Therapeutics Limited under which Professor John Martin agrees to act as a consultant. The consultancy agreement is for a fixed term until 10 January 2006 after which it is terminable upon not less than six months' notice by either party. Under the consultancy agreement, Professor Martin receives an annual fee of £45,000 in respect of his consultancy services. Under the consultancy agreement he is to provide his services to the Company for up to 60 days per year. The consultancy agreement provides that all intellectual property which is created in the course of his duties under the consultancy agreement will remain the property of the Company; and
  - (b) an agreement dated 19 November 1997 (as varied by letter dated 24 November 1999) with Ark Therapeutics Limited under which Dr Stephen Barker agrees to act as a consultant. The consultancy agreement is terminable upon not less than six months' notice by either party. Under the consultancy agreement, Dr Barker receives an annual fee of £30,000 in respect of his consultancy services. Under the consultancy agreement he is to provide his services on a "when needed" basis for up to 5 working days in each month to the Company. The consultancy agreement provides that all intellectual property which is created in the course of his duties under the consultancy agreement will remain the property of the Company.

## 11. INCENTIVES

The rights currently attaching to the 'C' Ordinary Shares and the 'D' Ordinary Shares under the Company's articles of association (in effect immediately prior to Admission) provide that, upon Admission, such shares be redeemed and the holders thereof be issued new Ordinary Shares, such number of shares being dependent upon the post-money valuation of the Company on Admission. Accordingly, following the passing of the resolution referred to in paragraph 5.5(g)(vii) of Part X and subject to Admission, 2,854,665 Ordinary Shares (assuming the Capital Reorganisation has taken place) will be issued to the Family

Benefit Trust in respect of Nigel Parker and 495,639 Ordinary Shares (assuming the Capital Reorganisation has taken place) will be issued to the Family Benefit Trust in respect of Martyn Williams.

In addition, Nigel Parker and Martyn Williams have been granted Management Options over a maximum of 250,000 Ordinary Shares and 45,000 Ordinary Shares respectively (500,000 and 90,000 Ordinary Shares respectively assuming the Capital Reorganisation has taken place), which will be capable of vesting between the first and second anniversaries of Admission, as described in paragraph 7.2(c) above. The exercise price is £0.605 and the actual number of shares which may be acquired on exercise will depend on the share price at the time of vesting, with the maximum number vesting if the share price is £6.00 or more.

Subject to Admission and at the discretion of the Remuneration Committee, certain executives including Nigel Parker and Martyn Williams will be considered for bonuses that cumulatively will not exceed 0.5 per cent. of funds raised payable in cash, as an incentive to achieving an initial public offering for the Company.

## 12. TAXATION

# 12.1 United Kingdom Taxation

The following statements are intended as a general guide to the current law and practice in the United Kingdom. They are not intended to be exhaustive and assume, save where specifically mentioned, that the relevant shareholder is resident in the United Kingdom for United Kingdom taxation purposes, that it does not hold its shares as the assets of a trade and that it is not a charity or other person with special tax status or claiming special tax reliefs or treatment. Any person who is in any doubt as to his taxation position or requires more detailed information is strongly advised to consult their own professional advisors.

# 12.1.1 Taxation of Chargeable Gains

Liability to UK taxation of chargeable gains will depend on the individual circumstances of the Shareholder.

A disposal of Ordinary Shares by a Shareholder who is resident or ordinarily resident in the UK for taxation purposes may, depending on the Shareholder's circumstances, and subject to any available exemption or relief, give rise to a chargeable gain or an allowable loss for the purposes of the taxation of chargeable gains.

A disposal of Ordinary Shares by a non-corporate Shareholder not resident in the UK but which carries on a trade, profession or vocation in the UK through a branch or agency and which has used the Ordinary Shares in or for the purposes of such trade, profession or vocation or which has used, held or acquired the Ordinary Shares for the purposes of such branch or agency or by a corporate Shareholder not resident in the UK but which carries on a trade in the UK through a permanent establishment and which used the Ordinary Shares in or for the purposes of the trade or which used, held or acquired the Ordinary Shares for the purposes of such permanent establishment may, depending on the Shareholder's circumstances and subject to any available exemption or relief, give rise to a chargeable gain or an allowable loss for the purposes of UK taxation of chargeable gains.

# 12.1.2 Taxation of Dividends

The Company is not required to withhold tax at source from dividends paid in respect of Ordinary Shares.

Individuals resident in the UK for taxation purposes are generally liable to income tax on the aggregate amount of any dividend received and a tax credit. The tax credit will be equal to one-ninth of the dividend received (or 10 per cent. of the aggregate of the dividend received and the related tax credit). For example, on a dividend received of £90, the tax credit would be £10, and an individual would be liable to income tax on £100. No further income tax is payable in respect of the dividend by UK resident individuals who are not liable to income tax at the higher rate (currently 40 per cent.). UK resident individuals who are subject to tax at the higher rate are subject to tax on dividends at the rate applicable to dividends (currently 32.5 per cent.) but are entitled to offset the 10 per cent. tax credit against such liability. For example, on a dividend received of £90 such a taxpayer would have to pay additional tax of £22.50 (representing 32.5 per cent. of the gross dividend less the 10 per cent. credit). For this purpose, dividends are treated as the top slice of an individual's income.

No repayment of the tax credit in respect of dividends can be claimed by a UK resident Shareholder, except where the Ordinary Shares are held in an ISA or PEP. In such a case, a claim can be made for repayment of the credit in respect of dividends paid before 6 April 2004. Special rules apply to dividends received by charities before 6 April 2004.

UK resident corporate Shareholders (other than dealers and certain insurance companies) are not liable to corporation tax or income tax in respect of dividends.

Tax exempt pension funds and charities cannot reclaim from the Inland Revenue tax credits attaching to dividends received on the Ordinary Shares, although charities may be entitled to limited compensation in lieu of repayable tax credits until 5 April 2004.

Non-UK resident Shareholders are not generally entitled to claim any part of the tax credit, subject to certain specific exemptions. Non-UK resident Shareholders may also be subject to tax on dividend income under any law to which they are subject outside the UK. Such Shareholders should consult their own tax advisers concerning their tax liabilities.

# 12.1.3 Stamp Duty and Stamp Duty Reserve Tax ("SDRT")

The statements below summarise the current position and are intended as a general guide only to the stamp duty and SDRT consequences of a transfer of Ordinary Shares. Special rules apply to agreements made by broker dealers and market makers in the ordinary course of their business and to certain categories of person (such as depositories and clearance services) who may be liable to stamp duty or SDRT at a higher rate,

No stamp duty or SDRT will generally be payable on the issue of New Ordinary Shares or on the transfer of the Sale Shares by a person acquiring such Offer Shares under the Offer.

A transfer for value of Ordinary Shares will generally be subject to stamp duty or SDRT. Stamp duty will arise on the execution of an instrument to transfer Ordinary Shares and SDRT will arise on the entry into an unconditional agreement to sell Ordinary Shares. Stamp duty and SDRT are normally a liability of the purchaser or transferee (although where such purchase is effected through a stockbroker or other financial intermediary, that person should normally account for the liability to SDRT and should indicate this has been done in any contract note issued by a buyer). The amount of stamp duty or SDRT payable on the consideration for the transfer is generally calculated at the rate of 0.5 per cent. of the consideration paid (with stamp duty rounded up to the nearest £5). A liability to SDRT will be cancelled and any SDRT already paid will be repaid, generally with interest, where an instrument of transfer is executed and stamp duty is paid on that instrument within six years of the date on which the liability to SDRT arises.

# 12.2 Tax Considerations for Certain US Holders

The following discussion describes the material US federal income and UK tax consequences of the purchase, ownership and disposition of Ordinary Shares to beneficial owners:

- who are residents of the US for purposes of the current UK/US income tax treaty (the "Income Tax Convention") and the UK/US Estate and Gift Tax Convention (the "Estate and Gift Tax Convention" and, together with the Income Tax Convention, the "Conventions");
- whose Ordinary Shares are not, for the purposes of the Conventions, effectively connected with a
  permanent establishment, or the performance of services through a fixed base, in the United
  Kingdom;
- · who otherwise qualify for the full benefits of the Conventions; and
- who are US Holders (as defined below).

The statements of US federal income and UK tax laws set out below are based on the US federal income tax laws, including the US Internal Revenue Code of 1986, as amended (the "Code"), its legislative history, existing and proposed Treasury Regulations thereunder, published rulings and court decisions, the Conventions and relevant UK tax laws, all of which are subject to change, possibly with retroactive effect. The Company has not requested, and will not request, a ruling from the US Internal Revenue Service (the "IRS") or the UK Inland Revenue with respect to any of the US federal income or UK tax consequences described below, and, as a result, there can be no assurance that the IRS or the UK Inland Revenue will not disagree with or will not challenge any of the conclusions the Company has reached and described herein.

The following discussion is not a complete analysis or description of all potential US federal income or UK tax consequences that may be relevant to all categories of potential purchasers that are US Holders, certain of which are subject to special tax treatment. The portions of this discussion relating to US federal income taxation address only shares held as capital assets within the meaning of section 1221 of the Code, and do not deal with the tax consequences to potential purchasers that are subject to special tax treatment (such as financial institutions, insurance companies, dealers or traders in securities or foreign currencies, tax exempt entities, regulated investment companies, partnerships or other entities classified as partnerships for US federal income tax purposes, persons holding a share as part of a straddle, hedging, conversion or integrated transaction, persons whose "functional currency" is not the US dollar, persons subject to alternative minimum tax and holders that are not US Holders and that own or are deemed to own 10 per cent. or more of any class of the Company's stock). This discussion does not address tax consequences under any US state, local, foreign or other tax law of an investment in Ordinary Shares.

As used herein, a "US Holder" is a beneficial owner of Ordinary Shares that is, for US federal income tax purposes:

- a citizen or resident of the US:
- a corporation, or other entity treated as a corporation, organised in or under the laws of the US or of any political subdivision thereof;
- an estate, income of which is subject to US federal income taxation regardless of its source;
- a trust (1) the administration of which is subject to the primary supervision of a court within the US and that is subject to the control of one or more US Holders as described in section 7701(a)(30) of the Code or (2) that has a valid election in effect under applicable US Treasury Regulations to be treated as a US person.

If a partnership holds Ordinary Shares, the tax treatment of a partner of such partnership will generally depend upon the status of the partner and the activities of the partnership. Those investors that are partners of a partnership purchasing Ordinary Shares are urged to consult their own tax advisers with respect to the particular consequences to them.

All potential US Holders of Ordinary Shares are urged to consult their own tax advisers with respect to the particular consequences to them under US federal, state, local, UK, and other applicable foreign tax laws (and possible changes to those tax laws) of the acquisition, ownership and disposition of Ordinary Shares.

## 12.2.1 Income Tax Convention

On July 24, 2001, the governments of the US and the UK agreed to the terms of the Income Tax Convention, which was amended by a protocol agreed on July 19, 2002 and which came into force on March 31, 2003. The Income Tax Convention replaces the previous tax treaty between the US and the UK ("Previous Income Tax Convention"). In general, US Holders will be entitled to the benefits of the Income Tax Convention, subject to various limitations. However, the provisions of the Previous Income Tax Convention may still be relevant for some US Holders. All potential US Holders are urged to consult their own tax advisers with respect to their eligibility for benefits under the Income Tax Convention and the Previous Income Tax Convention.

## 12.2.2 Taxation Of Dividends

### (a) UK Dividend Tax

As stated in paragraph 12.1.2, no UK withholding tax will be deducted from any dividends on Ordinary Shares. Under the terms of the Income Tax Convention. US Holders will not be entitled to claim any special foreign tax credits in respect of such dividends. Although US Holders of Ordinary Shares can elect that the Previous Income Tax Convention, which did provide for such withholding tax and credits, should apply to them where it confers greater benefits for a period of 12 months after the taking effect of the provisions of the Income Tax Convention, which for UK income tax purposes was April 6, 2003, it is not expected that the Company will pay any distributions prior to the expiration of such period.

#### (b) US Dividend Tax

Subject to the discussion of "Passive Foreign Investment Company Considerations" in paragraph 12.2.4 below, the gross amount of any distributions of cash or property that are actually or constructively received by a US Holder with respect to Ordinary Shares will be a dividend includible in gross income of such US Holder as ordinary income to the extent of the current and accumulated earnings and profits of the Company, as determined under US federal income tax principles. Dividends paid on Ordinary Shares generally will constitute income from sources outside the US and will not be eligible for the "dividends received" deduction allowed to US corporate shareholders in certain circumstances.

A distribution to a US Holder in excess of the Company's current and accumulated earnings and profits will be treated first as a non-taxable return of capital to the extent of such US Holder's adjusted tax basis in its Ordinary Shares, and any distribution in excess of such basis will constitute capital gain from the sale or exchange of property, and will be long term capital gain (taxable at a reduced rate for individual holders, trusts or estates) if such Ordinary Shares were held for more than one year.

The Company does not maintain calculations of its earnings and profits under US federal income tax principles. Therefore, a US Holder should expect that a distribution will generally be treated as a dividend, even if that distribution would otherwise be treated as a non-taxable return of capital or as capital gain under the rules described above. The amount of any distribution of property other than cash will be the fair market value of the property on the date of the distribution.

The gross amount of any distribution paid in foreign currency will be included in the gross income of a US Holder in an amount equal to the US dollar value of the foreign currency calculated by reference to the exchange rate in effect on the date such distribution was received by the US Holder, regardless of whether the foreign currency is converted into US dollars on that date. If the foreign currency received as a dividend is converted into US dollars on the date of receipt, a US Holder generally should not be required to recognize foreign currency gain or loss in respect of the dividend. If the foreign currency received as a dividend is not converted into US dollars on the date of receipt, a US Holder will have a basis in the foreign currency equal to its US dollar value on the date of receipt. Any gain or loss on a subsequent conversion or other disposition of the foreign currency will be treated as ordinary income or loss, and will generally be income or loss from sources within the US for foreign tax credit limitation purposes.

Under recently enacted US legislation (the "New US Tax Legislation"), certain dividends received by individual US Holders after 31 December 2002 will be subject to a maximum income tax rate of 15 per cent. This reduced income tax rate is only applicable to dividends paid by US corporations and "qualified foreign corporations" and only with respect to shares held by a qualified US Holder (i.e., an individual) for a minimum holding period (generally, 61 days during the 120 day period beginning 60 days before the ex dividend date). The Company believes that it is a qualified foreign corporation under the New US Tax Legislation. Accordingly, dividends paid by the Company to individual US Holders on Ordinary Shares held for the minimum holding period may be eligible for a reduced income tax rate. Under the New US Tax Legislation, the reduced tax rate for qualified dividends is scheduled to expire on 31 December 2008, unless further extended by Congress. All potential US Holders are urged to consult their own tax advisers regarding the implications of the New US Tax Legislation.

# 12.2.3 Taxation of Capital Gains

Subject to the discussion of "Passive Foreign Investment Company Considerations" in paragraph 12.2.4 below, gain or loss realised by a US Holder on the sale or other disposition of the Ordinary Shares will be subject to US federal income tax as capital gain or loss in an amount equal to the difference between the US Holder's adjusted tax basis in the Ordinary Shares and the amount realised on the sale or disposition. The capital gain or loss will be long-term capital gain or loss if the US Holder has held the Ordinary Shares for more than one year at the time of the sale or disposition. Gain or loss realised by a US Holder generally will be treated as US source gain or loss for US foreign tax credit purposes.

A US Holder that receives foreign currency on the sale or other disposition of Ordinary Shares will realise an amount equal to the US dollar value of the foreign currency on the date of sale (or in the case of cash basis and electing accrual basis taxpayers, the US dollar value of the foreign currency on settlement date). If a US Holder receives foreign currency upon a sale or exchange of Ordinary Shares, gain or loss, if any, recognised on the subsequent sale, conversion or disposition of that foreign currency will be ordinary income or loss, and will generally be income or loss from sources within the US for foreign tax credit limitation purposes. However, if such foreign currency is converted into US dollars on the date received by

the US Holder, a cash basis or electing accrual US Holder should not recognise any gain or loss on such conversion.

When a US Holder's basis in Ordinary Shares includes any amount recognised under the passive foreign investment company rules (described below in paragraph 12.2.4) and such US Holder recognises a loss on the sale or disposition that exceeds certain specified thresholds, the US Holder may be required to specifically disclose certain information with respect to the sale or disposition on its tax return under recently issued tax disclosure regulations. All potential US Holders should consult their own tax advisers as to the applicability of these disclosure regulations.

# 12.2.4 Passive Foreign Investment Company Considerations

A corporation organised outside the US generally will be classified as passive foreign investment company (a "PFIC") for US federal income tax purposes in any taxable year in which either: (a) at least 75 per cent. of its gross income is "passive income", or (b) on average at least 50 per cent. of the gross value of its assets is attributable to assets that produce "passive income" or are held for the production of passive income. Passive income for this purpose generally includes dividends, interest, royalties, rents and gains from commodities and securities transactions. In determining whether it is a PFIC, a foreign corporation is required to take into account a *pro rata* portion of the income and assets of each corporation in which it owns, directly or indirectly, at least a 25 per cent. interest.

The Company believes that it is not, and the Company does not expect to become, a PFIC for US federal income tax purposes for 2004 or future years. Note that PFIC status is fundamentally factual in nature, generally cannot be determined until the close of the taxable year in question, and is determined annually (the average value of assets for each year being the average of the fair market values of the assets determined as of the end of each quarter). Consequently, the Company can provide no assurance that it will not be a PFIC for either the current taxable year or for any subsequent taxable year. While the Company believes that it is currently not a PFIC, it is possible that the Company may be classified as a PFIC in the current or any future year due to failure to generate sufficient gross income from the Company's business, changes in its asset or income composition, or if its projections are not accurate. Because the Company's goodwill and other intangible assets are valued based on the anticipated market value of the Ordinary Shares immediately following the offering, a decrease in the price of the Ordinary Shares could result in the Company becoming a PFIC. If the Company is classified as a PFIC in any year that a US Holder is a Shareholder, the Company generally will continue to be treated as a PFIC for that US Holder in all succeeding years, regardless of whether the Company continues to meet the income or asset test described above. As discussed below, if the Company is classified as a PFIC in any year, special, possibly materially adverse, consequences would result for US Holders of Ordinary Shares. In addition, if the Company were a PFIC, it would not be a qualified foreign corporation (as described in paragraph 12.2.2(b) — Taxation of Dividends — US Dividend Tax), and dividends from the Company would not be eligible for the reduced 15 per cent. US income tax rate.

If the Company is a PFIC in any year during which a US Holder owns Ordinary Shares, such US Holder will be subject to additional US federal income taxes on any "excess distributions" received from the Company and any gain realised from the sale or other disposition of Ordinary Shares (whether or not the Company continues to be a PFIC). A US Holder receives an excess distribution to the extent that distributions on the Ordinary Shares during a taxable year exceed 125 per cent. of the average amount received during the three preceding taxable years (or, if shorter, the US Holder's holding period). Gain realised from the sale or other disposition of the Ordinary Shares is also treated as if the sale or disposition were an excess distribution. To compute the tax on the excess distributions or any gain, (a) the excess distribution or the gain is allocated ratably over the US Holder's holding period, (b) the amount allocated to the current taxable year and any year before the Company became a PFIC is taxed as ordinary income in the current year, and (c) the amount allocated to other taxable years is taxed at the highest applicable marginal rate in effect for each year and an interest charge is imposed to recover the deemed benefit from the deferred payment of the tax attributable to each year.

Some of the rules with respect to distributions and dispositions described above may be avoided if a US Holder makes a valid "mark to market" election (in which case, subject to certain limitations, such US Holder would essentially be required to take into account the difference, if any, between the fair market value and the adjusted tax basis of its Ordinary Shares at the end of a taxable year as ordinary income (or, subject to certain limitations, ordinary loss), in calculating its income for such year). In addition, gains from an actual sale or other disposition of Ordinary Shares will be treated as ordinary income, and any losses will be treated

as ordinary losses to the extent of any "mark to market" gains for prior years. A "mark to market" election is only available to US Holders in any tax year that the PFIC stock is considered to be "regularly traded" on a "qualified exchange" within the meaning of applicable US Treasury Regulations. The London Stock Exchange will constitute a "qualified exchange" for this purpose. Under the current US Treasury Regulations, PFIC stock is "regularly traded" if, among other requirements, it is traded (other than in de minimis quantities) on at least 15 days during each calendar quarter. Under proposed US Treasury Regulations, for the calendar year in which a corporation initiates an initial public offering of stock, the stock would meet the "regularly traded" requirement for that year if it is traded (other than in de minimis quantities) on at least 1/6 of the days remaining in the quarter in which the initial public offering of stock occurs, and on at least 15 days during each remaining quarter of such year. It is unclear when these proposed US Treasury Regulations will become finalised. If the proposed US Treasury Regulations are not applicable to US Holders of Ordinary Shares, or if the Company's stock is not otherwise treated as regularly traded in the year of the initial public offering of stock because of inability to satisfy the 15 day requirement for one or more quarters, a US Holder may still make a mark to market election in a succeeding year when the stock does so qualify. In such case, however, any gain recognised as a result of such initial election will be treated as an "excess distribution," subject to the treatment described in the preceding paragraph. All potential US Holders should consult their own tax advisers as to whether Ordinary Shares would qualify for the mark to market election and whether such election is advisable.

The foregoing rules with respect to additional US federal income taxes on excess distributions received from the Company and any gain realised from the sale or other disposition of the Ordinary Shares may be avoided if a US Holder is eligible for and timely makes a valid "QEF election" (in which case the US Holder would be required to include in income on a current basis its *pro rata* share of the Company's ordinary income and net capital gains). However, in order for a US Holder to be able to make the QEF election, the Company would have to provide such US Holder with certain information. The Company does not expect to provide the required information.

Each US Holder that holds a direct or indirect interest in a PFIC must make an annual return on IRS Form 8621 reporting distributions received and gains realised with respect to such PFIC.

All potential US Holders are urged to consult their own tax advisers regarding whether an investment in Ordinary Shares will be treated as an investment in PFIC stock and the consequences of an investment in a PFIC.

# 12.2.5 UK Inheritance and Gift Tax

If a US Holder is an individual domiciled in the US and is not a national of the UK for the purposes of the Estate and Gift Tax Convention, Ordinary Shares beneficially owned by such US Holder will not be subject to UK inheritance tax on the death of such US Holder or on a gift made by such US Holder during its lifetime, provided that any applicable US federal gift or estate tax liability is paid, except where such Ordinary Shares are part of the business property of the US Holder's UK permanent establishment or pertains to the US Holder's UK fixed base used for the performance of independent personal services. The Estate and Gift Tax Convention generally provides for tax paid in the UK to be credited against tax payable in the US, based on priority rules set forth in that Convention, in the exceptional case where an Ordinary Share is subject to both UK inheritance tax and US federal gift or estate tax. Where Ordinary Shares have been placed in trust by a settler who, at the time of the settlement, was a US Holder, such Ordinary Shares will generally not be subject to UK inheritance tax if the settler, at the time of the settlement, was domiciled in the US for the purposes of the Estate and Gift Tax Convention and was not a UK national.

# 12.2.6 US Gift and Estates Taxes

US Holders who are individuals will be subject to US gift and estate taxes with respect to the Ordinary Shares in the same manner and to the same extent as with respect to other types of personal property. All potential US Holders are urged to consult their own tax advisers regarding the US gift and estate tax consequences of transferring the Ordinary Shares.

# 12.2.7 UK Stamp Duty and Stamp Duty Reserve Tax

US Holders will not be entitled to a foreign tax credit with respect to any UK stamp duty or stamp duty reserve tax, but may be entitled to a deduction subject to applicable limitations under the Code. All potential US Holders are urged to consult their own tax advisers regarding the availability of a deduction under their particular circumstances.

#### 12.2.8 Transfer Reporting Requirements

A US Holder, including a tax exempt entity, that purchases Ordinary Shares will be required to file an IRS Form 926 or similar form with the IRS, if (1) the US Holder owned, directly or by attribution, immediately after the purchase at least 10 per cent. by vote or value of the Company or (2) the purchase, when aggregated with all purchases made by the US Holder, or any related person thereto, within the preceding 12 month period exceeds \$100,000. If a US Holder fails to file the required form, the US Holder could be required to pay a penalty equal to 10 per cent. of the gross amount paid for the Ordinary Shares, subject to a maximum penalty of \$100,000, except in cases involving intentional disregard. All potential US Holders should consult their own tax advisers for advice regarding this or any other reporting requirement which may apply to their acquisition of Ordinary Shares.

## 12.2.9 Information Reporting And Backup Withholding

Payments that relate to Ordinary Shares that are made in the US or by a US-related financial intermediary will be subject to information reporting. Information reporting generally will require each paying agent or custodian located in the US that makes payments, which relate to an Ordinary Share, to provide the IRS with information, including the beneficial owner's name, address, taxpayer identification number, and the aggregate amount of dividends paid to such beneficial owner during the calendar year. These reporting requirements, however, do not apply to all beneficial owners. Specifically, corporations, securities broker-dealers, other financial institutions, tax-exempt organisations, qualified pension and profit sharing trusts and individual retirement accounts are all excluded from reporting requirements.

Any financial intermediary holding Ordinary Shares on behalf of a beneficial owner, or paying agent or custodian located in the US that makes payments with respect to Ordinary Shares, may be required to backup a withholding tax equal to 28 per cent. of each payment of dividends on the Ordinary Shares in the event that a beneficial owner of an Ordinary Share:

- fails to establish its exemption from the information reporting requirements;
- is subject to the reporting requirements described above and fails to supply its correct taxpayer identification number in the manner required by applicable law; or
- under-reports its tax liability.

This backup withholding tax is not an additional tax and may be credited against the beneficial owner's US federal income tax liability if the required information is furnished to the IRS. Holders of Ordinary Shares that are not US Holders generally are not subject to information reporting or backup withholding, but may be required to provide certification of their non-US status in connection with payments received within the US or through US-related financial intermediaries. All potential investors are advised to consult their own tax advisers as to the effect, if any, of the information reporting and backup withholding rules on their receipt of payments which relate to Ordinary Shares.

## 12.3 OTHER TAX JURISDICTIONS

Any person who is in any doubt as to his taxation position, requires more detailed information than the general outline above or who is subject to tax in a jurisdiction other than the United Kingdom or the United States of America should consult his professional advisers.

# 13. WORKING CAPITAL

The Company is of the opinion that, taking into account available bank and other facilities and the net proceeds of the Offer receivable by the Company, the Group has sufficient working capital for its present requirements, that is, for at least the next 12 months from the date of this document.

#### 14. INSURANCE

The Group has taken out key-man life assurance policies in respect of Dr. Nigel Parker, Professor John Martin, Dr. Alan Boyd and Professor Seppo Ylä-Herttuala in the amount assured of £1,000,000 per person.

The Group's insurance broker has reviewed the insurance position of the Group generally and considers the Group's insurance cover to be adequate.

#### 15. LITIGATION

Neither the Company nor any of its subsidiaries is or has been involved in any legal or arbitration proceedings which may have, or have had during the 12 months preceding the date of this document, a significant effect on the Group's financial position and, so far as the Company is aware, no such proceedings are pending or threatened by or against the Company or any of its subsidiaries.

#### 16. MATERIAL CONTRACTS

Save as disclosed below, no contract (other than contracts entered into in the ordinary course of business) has been entered into by any member of the Group (a) within the two years immediately preceding the date of this document and which is, or may be, material; or (b) prior to the date of this document and which contains any provision under which any member of the Group has any obligation or entitlement which is material to the Group as at the date of this document:

- 16.1 a subscription and shareholders' agreement dated 13 August 2001 relating to Ark Therapeutics Limited, under which the parties agreed to terminate the previous subscription and shareholders' agreement dated 27 April 2000 (save for outstanding warranty provisions) and under which there was subscribed 9,756,757 'B' ordinary shares of 0.02 pence each for a consideration of 148 pence per share. The agreement contains various warranties from Ark Therapeutics Limited, the Management Team, John Martin and Seppo Ylä-Herttuala to the subscribers in relation to the business and affairs of Ark Therapeutics Limited including usual warranties in relation to the business. The warranty period in relation to warranties given by Ark Therapeutics Limited terminates two months after the publication of the audited accounts for Ark Therapeutics Limited for the financial period ending 31 March 2003. The parties to this agreement have agreed that this agreement shall terminate at Admission and the subscribers have agreed that they will not bring any claim, *inter alia*, under the warranties against Ark Therapeutics Limited following Admission;
- 16.2 a shareholders' agreement dated 24 April 2002 relating to the Company replicating the provisions of the subscription and shareholders' agreement dated 13 August 2001 relating to Ark Therapeutics Limited so that the provisions of that agreement applied to the Company as the new Group holding company from the date of the Reorganisation until Admission. The parties to this agreement have agreed that this agreement shall terminate at Admission and the subscribers have agreed that they will not bring any claim, *inter alia*, under the warranties against Ark Therapeutics Limited following Admission;
- 16.3 a sale and purchase agreement dated 24 April 2002 between the Company and the shareholders of Ark Therapeutics Limited (the "ATL Shareholders") whereby the ATL Shareholders exchanged all their shares in Ark Therapeutics Limited for shares of the same number and the same class in the Company, credited as fully paid, to effect the Reorganisation; and
- 16.4 the Underwriting Agreement (see paragraph 1.1 of Part IX).

# 17. SUMMARY OF MAIN INVESTMENTS

The following are summaries of the main investments in other undertakings made by the Group during the period since 1 April 1998:

Investment	Date	Consideration
Acquisition of Ark Therapeutics Oy	10 January 2001	The issue of 3,625,168 ordinary shares of 0.02 pence each in Ark Therapeutics Limited at a price
1		of £1.38 per share
Investment in KerraTec Inc	23 December	The issue of 85,000 common stock of 1 cent each in
	2003	KerraTec Inc. at par value

# 18. PRINCIPAL ESTABLISHMENTS

The Group has the following principal establishments:

#### London:

Property Address	<u>Use</u>	Tenure	Term expires <sup>(1)</sup>	erea (sq. m)	Rent
6 Warren Mews					
London W1P 5DJ	Administration	Leasehold	14 August 2006	102	£28,200

Property Address	<u>Use</u>	Tenure	Term expires <sup>(1)</sup>	Floor area (sq. m)	Rent
7 Warren Mews London W1P 5DJ	Administration	Leasehold	14 August 2006	97	£26,700 per year
9 Warren Mews London W1P 5DJ	Administration	Leasehold	14 August 2006	52	£14,500 per year
10 Warren Mews London W1P 5DJ	Administration	Leasehold	14 August 2006	56	£15,500 per year
1 Fitzroy Mews London W1T 6DE	Registered office, development	Leasehold	14 August 2006	141	£38,710 per year

Note:

# Finland:

Property Address	<u>Use</u>	Tenure	Term expires	Floor area	Rent <sup>(1)</sup>
Neu Laniementie 2 L 9				(sq. m)	
40210 Kuopio Finland	Administration and research	(see below)			
(a) University GMP unit		Leasehold	31 December 2005	140	€6,728 per month <sup>(2)</sup>
(b) GMP2		Leasehold	31 December 2005	128	€2,523 per month <sup>(2)</sup>
(c) QA/QC lab		Leasehold	31 December 2005	131	€1,493 per month
(d) R&D lab and offices		Leasehold	6 months' notice	175	€2,691 per month
(e) Basement storage		Leasehold	3 months' notice	24	€121 per month
(f) Office space		Leasehold	6 months' notice	95	€1,000 per month
(g) Office space		Leasehold	6 months' notice	66	€812 per month
(h) Mikroteknia office space		Leasehold	February 28 2005	176	€2,450 per month

Note:

# 19. SIGNIFICANT CHANGE

There has been no significant change in the financial or trading position of the Group since 31 December 2003, the end of the last financial period for which the consolidated accounts of the Group have been published and as disclosed in the Accountants' Reports in Part VIII.

# 20. MISCELLANEOUS

# 20.1 Expenses

The total costs and expenses relating to the Offer are payable by the Company and, including a placing commission of 5.8 per cent. which amounts to £3,205,630, inclusive of a corporate finance fee of £150,000,

<sup>(1)</sup> All leases have a tenant's break clause at 14 August 2005.

<sup>(1)</sup> All rents are plus VAT at the rate of 22 per cent.

<sup>(2)</sup> Ark Therapeutics Oy has an option to renew from 1 January 2006 to 31 December 2010.

are estimated to amount to £4,741,451 million (excluding VAT). The estimated net proceeds accruing to the Company from the Offer amount to £50.3 million.

## 20.2 Consents

- (a) Credit Suisse First Boston has given and has not withdrawn its written consent to the issue of this document with the inclusion herein of references to its name in the form and context in which they are included.
- (b) Nomura has given and has not withdrawn its written consent to the issue of this document with the inclusion herein of references to its name in the form and context in which they are included.
- (c) Deloitte & Touche LLP has given and has not withdrawn its written consent to the inclusion herein of its Accountants' Report, and the references to its Accountants' Report and to its name in the form and context in which they are included, having also authorised the contents of its said Accountants' Report for the purposes of Regulation 6(1)(e) of The Financial Services and Markets Act 2000 (Official Listing of Securities) Regulations 2001.
- (d) Cambridge Consultants Limited has given and has not withdrawn its written consent to the issue of this document with the inclusion herein of its report and the references to its report and to its name in the form and context in which they are included, having also authorised the contents of its said report for the purposes of Regulation 6(1)(e) of The Financial Services and Markets Act 2000 (Official Listing of Securities) Regulations 2001.
- (e) Gill Jennings & Every has given and has not withdrawn its written consent to the issue of this document with the inclusion herein of its report and the references to its report and to its name in the form and context in which they are included, having also authorised the contents of its said report for the purposes of Regulation 6(1)(e) of The Financial Services and Markets Act 2000 (Official Listing of Securities) Regulations 2001.

# 20.3 Financial information

The financial information set out in Part VIII of this document relating to Ark Therapeutics Group plc does not constitute statutory accounts within the meaning of section 240 of the Act. Information relating to Ark Therapeutics Group plc for the year ended 31 March 2001 and the nine months ended 31 December 2001 has been extracted from the statutory accounts of Ark Therapeutics Limited and restated as if Ark Therapeutics Group plc had always been in existence. Deloitte & Touche LLP, chartered accountants and registered auditors, of Leda House, Station Road, Cambridge CB1 2RN or their predecessor firm, Deloitte & Touche, have reported upon the consolidated statutory accounts of Ark Therapeutics Group plc for the years ending 31 December 2002 and 31 December 2003 within the meaning of section 235 of the Act. Arthur Andersen reported on the consolidated statutory accounts of Ark Therapeutics Limited for the year ending 31 March 2001 and the nine months ended 31 December 2001 within the meaning of section 235 of the Act. Each such report was unqualified within the meaning of section 262(1) of the Act and did not contain a statement under sections 237(2) or (3) of the Act. Statutory accounts of the Group or Operating Group in respect of these periods have been delivered to the Registrar of Companies in England and Wales pursuant to section 242 of the Act. The appointed auditors are Deloitte & Touche LLP.

## 20.4 Registrars and receiving bankers

The registrars of the Company are Capita IRG Plc the Registry, 34 Beckenham Road, Beckenham, Kent BR3 4TU and the receiving bankers for the Offer are Credit Suisse First Boston Equities Limited, One Cabot Square, London E14 4QJ.

# 20.5 Dependency on patents

The future profitability of the Group will depend upon, amongst other things, its ability to secure and protect the intellectual property relating to the products it brings to market. It is therefore fundamental to the business of the Group that it obtains and maintains patent protection for its products. For a description of the patents that the Group has or has applied for, please see the Patent Attorneys' Report at Part VI.

# 20.6 Funding requirements

The Directors currently estimate that the funding requirements for the Group for the two year period following Admission will be approximately £38.6 million. The Directors believe that such current estimated funding requirements can be funded from the Group's existing cash resources and the net proceeds of the Offer receivable by the Company.

# 21. DOCUMENTS AVAILABLE FOR INSPECTION

Copies of the following documents will be available for inspection during normal business hours on any weekday (Saturdays and public holidays excepted) at the offices of Ashurst, Broadwalk House, 5 Appold Street, London EC2A 2HA up to and including 17 March 2004:

- (a) the memorandum and articles of association of the Company;
- (b) the audited accounts for the three years and nine months ended 31 December 2003 and a statement of adjustments in respect thereof;
- (c) the report of Deloitte & Touche LLP set out in Part VIII of this document;
- (d) the report by Cambridge Consultants Limited set out in Part V of this document.
- (e) the report by Gill Jennings & Every set out in Part VI of this document.
- (f) the material contracts referred to in paragraph 16 above;
- (g) the service contracts, letters of appointment and consultancy agreements referred to in paragraph 10 above;
- (h) the letters of consent referred to in paragraph 20.2 above; and
- (i) the rules of the Share Option Plans referred to in paragraph 7 above.

Dated 3 March 2004

## **DEFINITIONS**

The following definitions apply throughout this document, unless the context requires otherwise:

"Act" the Companies Act 1985, as amended

"Ark" or "Group" the Company and its subsidiary undertakings

"Accountants' Report" the report prepared by Deloitte & Touche LLP and set out in Part VIII

of this document

"Admission" admission of the Ordinary Shares, issued and to be issued pursuant to

the Offer, (i) to listing on the Official List and (ii) to trading on the London Stock Exchange's market for listed securities becoming effective in accordance with paragraph 7.1 of the Listing Rules and the Standards

respectively

"Capital Reorganisation" (i) the re-designation of each existing 'A' ordinary share of 0.02 pence

and each 'B' ordinary share of 0.02 pence in the capital of the Company as an ordinary share of 0.02 pence (in accordance with the Company's articles of association and the resolution dated 24 February 2004 referred to in paragraph 5.5(g) of Part X) and the proposed bonus issue of 99 ordinary shares of 0.02 pence each for every one existing ordinary share of 0.02 pence each and the consolidation of every 50 such shares into one Ordinary Share of 1 pence each; (ii) the redemption of the redeemable preference shares of £1 each in the Company; and (iii) the redemption of the Management Shares of the Company and the issue of Ordinary Shares in their place in accordance with the Company's articles of association; each to take effect conditionally upon, and

simultaneously with, Admission

"Combined Code" the Combined Code on Corporate Governance, as appended to the

Listing Rules

"Company" Ark Therapeutics Group plc

"CREST" the relevant system (as defined in the Regulations) in respect of which

CRESTCo Limited is the Operator (as defined in the Regulations)

"Credit Suisse First Boston" Credit Suisse First Boston Equities Limited and/or Credit Suisse First

Boston (Europe) Limited as the case may be, with references to Credit Suisse First Boston as underwriter, lead manager, bookrunner or stabilising manager being to Credit Suisse First Boston Equities Limited, and references to Credit Suisse First Boston as financial adviser or

sponsor being to Credit Suisse First Boston (Europe) Limited

"Directors" or "Board" the board of directors of Ark

"Employee Share Offer" the offer of up to 21,931 New Ordinary Shares to Directors and

employees of the Group at the Offer Price as part of the Offer

"Exchange Act" the US Securities Exchange Act of 1934, as amended

"Family Benefit Trust" the Ark Therapeutics Group plc Family Benefit Trust

"FSMA" the Financial Services and Markets Act 2000

"IAS" International Accounting Standards

"Listing Particulars" this document, which comprises listing particulars relating to the

Company prepared in accordance with the listing rules under section 79

of the Financial Services and Markets Act 2000

"Listing Rules" the listing rules of the UK Listing Authority made pursuant to

section 74(4) of the Financial Services and Markets Act 2000 and contained in the UK Listing Authority's publication of the same name

"London Stock Exchange" London Stock Exchange plc

"Management Shares" in respect of Nigel Parker, the non-convertible 'C' ordinary shares of 0.02 pence each and in respect of Martyn Williams the nonconvertible 'D' ordinary shares of 0.02 pence each, which were issued to the Family Benefit Trust pursuant to a shareholders' resolution of 16 January 2004 and which, conditional upon and simultaneously with Admission, will be redeemed by the Company and in the place of which a number of New Ordinary Shares will be issued to the Family Benefit "Management Options" the options granted to Nigel Parker and Martyn Williams under the Unapproved Executive Plan, as defined and described in paragraphs 7.2 and 11 of Part X "New Ordinary Shares" the 41,413,996 new ordinary shares of 1 pence each to be issued by the Company pursuant to the Offer "Nomura" Nomura International plc "Non-executive Directors" the non-executive directors of the Company who, at the date of this document are Dennis Turner, Peter Keen, Sir Mark Richmond and Dr Wolfgang Plischke "North America" the United States and Canada "Offer" the offer of 41,555,996 Ordinary Shares described in this document "Offer Price" the price at which each Ordinary Share is to be sold under the Offer, being 133 pence "Offer Shares" the New Ordinary Shares and the Sale Shares "Official List" the Official List of the UK Listing Authority "Operating Group" Ark Therapeutics Limited and its subsidiary undertaking "Ordinary Shares" ordinary shares of 0.02 pence each in the capital of the Company which, conditional upon and simultaneously with Admission will be reorganised into ordinary shares of 1 pence each in the capital of the Company "Over-Allotment Option" the option granted to Credit Suisse First Boston by the Company to require the Company to issue up to 6,233,399 Ordinary Shares as more particularly described in paragraph 1.1(i) of Part IX "QIBs" qualified institutional buyers, as defined in Rule 144A under the Securities Act "Registrar" the registrar of the Company, Capita IRG Plc "Regulation S" as defined in the Securities Act "Regulations" The Uncertificated Securities Regulations 2001 (SI 2001/3755) "Reorganisation" the insertion of the Company as the holding company of the Group and all acts which were undertaken to achieve such insertion "Rule 144A" Rule 144A of the Securities Act "Sale Shares" the 142,000 Ordinary Shares being sold by the Selling Shareholders (assuming the Capital Reorganisation has taken place) "SEC" the US Securities and Exchange Commission "Securities Act" the US Securities Act 1933, as amended "Selling Shareholders" Seppo Ylä-Herttuala, Jukka Luoma and Leena Luoma, being Finnish

Admission

shareholders of the Company who are selling sufficient Ordinary Shares in the Offer to meet certain Finnish tax liabilities arising as a result of "Share Option Plans" the share option plans of the Company and/or Ark Therapeutics Limited,

as described in paragraph 7 of Part X

"Shareholders" holders of Ordinary Shares

"Standards" the requirements contained in the publication "Admission and

Disclosure Standards" containing, *inter alia*, the admission requirements for trading on the London Stock Exchange's markets for listed securities

"UCL" University College London

"UK" United Kingdom

"UK GAAP" accounting principles generally accepted in the UK

"UK Listing Authority" the Financial Services Authority acting in its capacity as the competent

authority for the purposes of the Financial Services and Markets Act

2000 as amended from time to time

"Underwriters" Credit Suisse First Boston and Nomura

"Underwriting Agreement" the underwriting agreement relating to the Offer entered into between,

inter alia, the Company, the Directors, the Selling Shareholders, Credit Suisse First Boston and Nomura as Underwriters, details of which are

set out in paragraph 1.1 of Part IX

"US" or "United States" United States of America

"US GAAP" accounting principles generally accepted in the US

#### GLOSSARY

The following technical terms used in this document have the following meaning:

510k approval section 510(k) of the Food, Drug and Cosmetic Act requires those

device manufacturers who must register to notify FDA, at least 90 days in advance, of their intent to market a medical device. This is known as Premarket Notification — also called PMN or 510(k). It allows the FDA to determine whether the device is equivalent to a device already placed into one of the three classification categories. Thus, "new" devices (not in commercial distribution prior to May 28, 1976) that have been

classified can be properly identified

Access graft the joining of a length of synthetic material (the graft) between an artery

and a vein

ACE Angiotensin Converting Enzyme

Actin one of the protein components in muscles. The other main component

being myosin

Ad 5 a specific type of adenovirus that is used for gene transfer

Adenovirus a common virus that infects humans. More than 40 types are known to

infect man causing upper respiratory symptoms, acute respiratory

disease, conjunctivitis and gastroenteritis

Adventitial pertaining to the adventitia which is the membranous outer covering of

an organ or a blood vessel

Agonist a substance which stimulates or turns on biological activity, usually by

acting at a receptor site

AIDS Acquired Immune Deficiency Syndrome

Ang I Angiotensin I
Ang II Angiotensin II

Angiogenesis growth of new blood vessels

Angioplasty procedure for opening a narrowed or blocked blood vessel by inserting a

small balloon into the affected segment of the artery and inflating it

Angiotensin renin system a hormonal system involved in the regulation of blood pressure

Antagonist a substance which competes with the agonist at the receptor site and

inhibits biological activity

Antibody a protein produced by the immune system of the body in response to a

foreign chemical or biological entity. Monoclonal antibodies are frequently used as drugs. They are produced to all exhibit the same

antigenic specificity

Anti-thrombotics medicines that prevent the blood from clotting

Aortic relating to the aorta (main blood vessel in the body) or the aortic

opening of the left ventricle of the heart

Arterial bypass graft the joining of a length of vein or synthetic material (the graft) onto an

existing artery at least two points so that blood flow passing through the

graft flows past a blockage in the original artery

Arterial gene expression the presence and/or activation of genes within walls of arteries

Atherosclerosis disease that causes the build-up of fatty substances, cholesterol, cellular

waste products, calcium and other substances which form a plaque on

the inside of a blood vessel

AVF arteriovenous fistula

AVHA arteriovenous haemodialysis access

Biodistribution the circulation of chemicals or medicines around the body

BLA Biologics Licence Application, documentation filed by a drug company

to the US Food and Drug Administration containing all aspects of a biological therapeutic agent such that the FDA can decide whether or

not it can be approved for sale to doctors

C reactive protein testing a chemical marker in the body which increases in response to

inflammation and certain diseases

Cachexia a general weight loss and wasting occurring in the course of a chronic

disease such as cancer

Cartoid Artery the main blood vessel supplying the head and brain

Catabolism any destructive metabolic process by which organisms convert

substances into excreted compounds such as the breakdown of nutrients

or internal energy stores

CE Marking products that come under a European Directive and are to be placed on

the market in the EU, must bear CE Marking — it is a legal

requirement. CE Marking is the manufacturer's claim that the product meets the essential requirements of all relevant EU Directives

cGMP Certified Good Manufacturing Practice, formal standards of facilities

cleanliness, process, quality controls and documentation set out and periodically monitored by the main medicines control agencies to which a company has to conform in order to manufacture a medicinal product

for human use

Chemotherapy treatment of disease by means of chemical substances or drugs; usually

used in relation to cancers

Clinical relating to the treatment and care of a patient. Denoting the symptoms

and course of a disease, as distinguished from the laboratory findings or

anatomical changes

Controller Zones specific sections along a chromosome which are directly linked to genes

and act like switches for the gene function

CPMP Committee for Proprietary Medicinal Products which is part of the

European Agency for the Evaluation of Medicinal Products

Corticosteroids a type of medicine used to treat inflammatory conditions and disease

Cytotoxics a chemical that causes destruction of cells. An alternative word used for

chemotherapy

Cytokines hormone-like proteins, secreted by many cell types, which regulate the

intensity and duration of immune responses and are involved in cell-to-

cell communication

De novo stenosis a new stricture or blockage which arises in blood vessels

Delivery device a mechanical structure which contains a medicine and which allows it to

be given to a specific site in the body

DNA (deoxyribonucleic acid) the molecule that encodes the genetic

information. DNA is a double-stranded molecule held together by weak

bonds between base pairs of nucleotides to form a double helix

Drug targeting platform a mechanism for directing medicines to a specific site in the body

DSMB Drug Safety Monitoring Board. Responsible for examining the safety

aspects of a medicine under development

Efficacy produces a positive effect. Treats a disease successfully

EMEA the European Agency for the Evaluation of Medicinal Products

Endothelium the layer of cells lining the inside surfaces of blood vessels, lymph

vessels and body cavities

Equivocal zone a term used in relation to diagnostic testing which relates to how

specific and sensitive the results of the test are

Exceptional circumstances a term used in relation to medicine approval by a Government

Regulatory Agency. For diseases where there are no treatments the medicine may be granted approval with limited clinical data. This

enables the medicine to be made available for patients

Expression the translation of the information encoded in the gene into a protein

Fast Track Designation the Fast Track programme of the FDA, designed to facilitate the

development and expedite the review of new drugs that are intended to treat serious or life-threatening conditions and that demonstrate the potential to address unmet medical needs. Such designation is granted, if judged appropriate, by the FDA after review of a Fast Track Designation

Submission for the specific drug from a company

FDA Food & Drug Administration, the consumer protection agency

responsible for public health in the USA, which ensures that safe and

effective products reach the market in a timely manner

FTC Federal Trade Commission

Functional Genomics the development and application of experimental approaches to assess

gene function

GCV Ganciclovir

Gene Payload the genetic material for which a vector has the capacity

GMP Good Manufacturing Practice, formal standards of facilities cleanliness,

process, quality controls and documentation set out and periodically monitored by the main medicines Control Agencies to which a company

has to conform in order to manufacture a medicinal product for

human use

Good Laboratory Practice formal standards of facilities, process, quality controls and

documentation which a company has to conform with in relation to its

laboratory research

HAART Highly Active Anti-Retroviral Therapy, this is the "triple therapy" used

to treat HIV positive patients

Haemodialysis graft see 'Access Graft' Used in the treatment of patients with kidney failure

Healthy People 2010 Directive US Federal Government health target policy document outlining key

areas of medical need that need addressing in the US

Histology the science concerned with the minute structure of cells, tissues, and

organs in relation to their function

HIV Human Immunodeficiency Virus

HSV-tk Herpes Simplex Virus-thymidine kinase gene

Hyperplasia excessive growth of cells

Hypertrophy general increase in bulk of a part or organ, due to increase in size, but

not in number, of individual tissue elements

Hypotension low arterial blood pressure

Immunoassay detection and assay of substances by serological (immunological)

methods

in vitro referring to experiments involving living cells performed outside the

intact organism of origin in a laboratory environment

in vivo referring to experiments performed on an intact organism

IND Investigational New Drug, an IND is an application in the USA to the

FDA to permit a new drug to be sent to investigators for use in clinical

trials. Officially it is synonymous with 'Notice of Claimed

Investigational Exemption for a New Drug'

Intima the inner layer of a blood vessel, comprising in the normal vessel an

endothelial monolayer on the luminal side with a sub-cellular elastic

extracellular matrix containing a few smooth muscle cells

Intimal hyperplasia excessive growth of cells within a blood vessel wall

Intratumoural within a cancer

Karnofsky score a measurement used to assess consciousness

Lacticacidosis an accumulation of acid metabolites in the body due to increased lactic

acid levels

(lacZ) a marker gene

Late Stage Phase IIb, Phase II/III and Phase III

Line extension development the regulatory, and where necessary, clinical trials required to broaden

the indication for an existing approved product

Lipid-lowering agents medicines that reduce fat levels in the blood

Lipodystrophy defective metabolism of fat, commonly seen in patients treated with HIV

infections

MAA Marketing Authorisation Application, the complete set of information for

a product on which it was granted a licence to permit its sale to doctors

MHRA UK Medicine Authority — a Government Agency

Mitochondrion a double-membrane organelle in the cell cytoplasm, which is the

principal source of energy of the cell. Each mammalian cell has a number of mitochondria, which contain the cytochrome enzymes of terminal electron transfer and the enzymes of various metabolic

pathways

Myosin one of the protein components in muscles. The other main component

being actin

NARTIS Nucleoside Analogue Reverse Transcriptase Inhibitors. The main

treatment used in HIV patients

NDA New Drug Application. An NDA is an application to the Food and Drug

Administration in the USA to approve marketing of a new drug

Nitric oxide a colourless, free-radical gas; it reacts rapidly with  $O_2$  to form other

nitrogen oxides and ultimately is converted to nitrite (NO<sub>2</sub>) and nitrate (NO<sub>3</sub>). Physiologically, it is a naturally occurring vasodilator formed in endothelial cells, macrophages, neutrophils and platelets and a mediator of cell-to-cell communication formed in bone, cells and peripheral

nerves

Nucleotide the basic molecular unit of DNA, composed of a phosphate backbone, a

sugar molecule and a purine or pyrimidine base

Oncologist a specialist physician who treats cancer patients

Orphan Drug Status

a term which describes a drug with Orphan Drug Status granted by the FDA, and/or the EMEA. Such status confers certain development, registration and marketing advantages for new treatments to be used in rare diseases or conditions, as detailed more fully in Part IV — Regulatory framework

Ox-LDL

Oxidised Low Density Lipoprotein

Ox-LDL-Ab

Oxidised Low Density Lipoprotein Antibodies

Peptide

general term for a class of molecule containing two or more amino acids linked together through a peptide bond (carboxyl group from one amino acid linked to amino group of other)

Peptoid

a modified peptide molecule, changed in some way from the 'natural' form of peptide present in biological systems

Periadventitial delivery

administration of chemicals, compounds or medicines to the outside of the blood vessels

**PCT** 

Patent Co-operation Treaty

Pharmacodynamics

is the study of a drugs actions in the body over time, this includes absorption, distribution, localisation, biotransformation, and excretion. (in simple terms what the drug does to the body)

Pharmacokinetics

looks at absorption, distribution, metabolism, and excretion of drugs. (what the body does to the drug)

Phase I

Phase I — where the drug is tested for safety in healthy individuals. This is normally the first time the drug is given to humans. In one or more clinical trials, safety, tolerability, dose range, pharmacodynamic profile and pharmacokinetic profile are explored

Phase II

Phase II — where the drug is given to patients with the disease for which it is believed the drug may have some therapeutic effect. Positive efficacy is often referred to as clinical 'proof of concept'. This Phase should conclude with evidence of whether the drug works, which patient population to target, and what is the optimal dose between beneficial effect and side effect

Phase III

Phase III — where the drug undergoes a 'dry run' of its ultimate proposed use on the market. The trials in this Phase need to prove to a strong degree of statistical significance that the drug presented at a particular dose, to a particular population and in a particular formulation has sufficient effect along with appropriately low side effects. The 'pivotal Phase III trial' is that which ultimately provides statistically sound evidence of effect and safety

Phase IIa

where the potential treatment is for a severe disease and hence is so potent that it is unjustifiable to ever try the drug in healthy people, as this would put them at unreasonable risk. In this case, Phase I trials are not executed. In its place, a 'Phase I-like' study is carried out on patients with the disease in question, referred to as a 'Phase IIa'. Whilst the main objective of a Phase IIa is to determine safety, since the trial(s) is executed in sick individuals, the company will necessarily also collect anecdotal data on efficacy and dosing, and this may be sufficient to jump straight to a Phase III (or a Phase II/III) trial

Phase IIb

following a Phase IIa trial, it is normally still necessary to carry out 'Phase II-like' clinical trials to fully evaluate therapeutic dosing range, this is referred to as Phase IIb. Since the drug will have already been in sick individuals (from the Phase IIa), the degree of exploration and data acquisition required to carry out this kind of Phase II trial to statistically significant levels should be somewhat less than a 'full' Phase II

Phase II	ИΠ
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where it is expected that a Phase II-like trial will be sufficient to produce statistically sufficient data for approval, removing the need for a Phase III trial. The expectation that these trials will be sufficient for approval may once the trials have begun be shown to be unfounded, and as such the trials are designed so that they can be easily expanded into full Phase III trials without the need to repeat from scratch. Phase II/III trials are usually entered into when

- a drug candidate has an unusually high efficacy and hence produces statistically significant results with only a small trial
- (ii) is in an orphan indication with high unmet clinical need, and hence the regulator requires a lower statistical threshold for results and hence requires only a small trial

phase IV clinical studies performed after a new medicine is approved and marketed

a pivotal trial is the ultimate trial upon which an application for a marketing licence from the FDA will be granted if the drug is proven efficacious

a patch or small differentiated area on a body surface e.g. skin, mucosa or arterial wall

the determination of appropriate doses and means of delivery of drugs the Phase of drug discovery and development which precedes testing of the drug in humans. Many studies carried out in this Phase are required by regulatory agencies before they will allow testing in man

situations or conditions which might influence the outcome of a disease e.g. age, sex, cancer type

evidence that a medicine might be useful to treat a particular disease a chemical that is released in response to an inflammatory disease in the body

a general term describing types of large biological molecules consisting of combinations of amino acids linked by peptide bonds (carboxyl group from an amino acid linked to amino group of another). The term protein is generally reserved for molecules counting 70 or more amino acids raised blood pressure in the lungs

US Recombinant DNA Advisory Committee. A subcommittee of the National Institutes of Health in the USA, concerned with the regulation of studies involving gene medicines

the medical specialty concerned with the use of electromagnetic or particulate radiation in the treatment of disease in particular, cancer areas along a gene where the messenger, ribonucleic acid, translates the gene into protein

a molecule located within a cell or on the surface of a cell, to which an agonist or antagonist will bind; as a result of that binding, a biological response is produced or blocked

hormonal system which regulates blood pressure re-closing of an artery after angioplasty or other procedures to open a

a specific type of virus that can only infect cells which are dividing a description used in relation to adverse effects produced by a medicine a term for drugs or natural biological molecules below a certain size and specifically excluding large biological molecules such as proteins,

antibodies, and genes of derivatives thereof

Phase IV

Pivotal study

Plaque

Posology
Pre-clinical (development)

Prognostic factors

Proof of principle

Prostacyclin

Protein

Pulmonary hypertension

RAC

Radiotherapy

Reading frames

Receptor

Renin Angiotensin System

Restenosis

Retrovirus Safety profile Small molecule blockage or narrowing

Stenosis narrowing of an artery, anastomosis, graft or vein

Surrogate end points a surrogate end point of a clinical trial is a laboratory measurement or a

physical sign used as a substitute for a clinically meaningful endpoint that measures directly how a patient feels, functions or survives

Systemic throughout the body

TK Thymidine Kinase

Toxicology the study in biological systems of the undesirable and/or harmful effects

of substances, and in particular specific formulations of drug candidates in development or established drugs, with administration of the test substance at much higher doses than would be used in clinical treatment

Transfection the transfer of a gene into a cell

Transgene a gene which was not originally within a particular cell or cells of a

tissue, and which has been introduced or 'transfected' by a gene transfer

procedure

Ulcer a lesion on the surface of the skin or on a mucous surface, caused by

superficial loss of tissue, usually with inflammation

Vector a chemical or molecular structure used to facilitate DNA gene delivery

into cells

VEGF Vascular Endothelial Growth Factor: is part of a family of growth

factors, designated VEGF-A, VEGF-B, etc that stimulate the growth of

endothelial cells

VEGF-R Vascular Endothelial Growth Factor Receptor: there is a family of these

receptors, designated VEGF-R-1, VEGF-R-2, etc

Venous ulcer an ulcer on the leg or foot that occurs in patients with circulatory

problems

Versatile vector programme a method used to deliver gene medicines to specific sites in the body

# **ACADEMIC PAPERS**

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Ark Therapeutics Group plc

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#### **APPENDIX 12**

## Documents filed with the London Stock Exchange in respect of notifiable shareholdings:

- (a) Notification of Major Interests in Shares dated June 9, 2004.
- (b) Notification of Major Interests in Shares dated May 28, 2004.
- (c) Notification of Major Interests in Shares dated May 11, 2004.
- (d) Notification of Major Interests in Shares dated March 26, 2004.
- (e) Notification of Major Interests in Shares dated March 19, 2004.



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AKT

Headline Released Holding(s) in Company 11:33 9 Jun 2004

Number

5734Z

RNS Number:5734Z Ark Therapeutics Group PLC 9 June 2004

Ark Therapeutics Group plc 9 June 2004

Notification of Major Interests in Shares

1. Name of Company:

Ark Therapeutics Group plc

2. Name of shareholder having a major interest:

Lansdowne Partners Limited Partnership

3. Please state whether notification indicates that it is in respect of holding of the shareholder named in 2 above or in respect of a non-beneficial Interest:

As in paragraph 2 above

4. Name of registered holder:

n/a

5. Number of shares acquired:

500,000

6. Percentage of Issued class:

0.4%

7. Number of shares disposed:

n/a

8. Percentage of Issued class:

n/a

9. Class of Security:

Ordinary shares

10. Date of transaction:

7 June 2004

11. Date Company informed:

- 8 June 2004
- 12. Total holding following this notification:

7,878,500

- 13. Total percentage holding of issued class following this notification:
  6.23%
- 14. Name of contact and telephone number for queries:

Nick Plummer - +44 (0)207 391 4084

- 15. Name of company official responsible for making this notification:
  Nick Plummer General Counsel and Company Secretary
- 16. Date of notification:

9 June 2004

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Company TIDM Ark Therapeutics Group PLC

AKT

Headline Released Holding(s) in Company 12:21 28 May 2004

Number

2031Z

RNS Number:2031Z Ark Therapeutics Group PLC 28 May 2004

SCHEDULE 10

NOTIFICATION OF MAJOR INTERESTS IN SHARES

NAME OF COMPANY 1)

ARK THERAPEUTICS GROUP PLC

2) NAME OF SHAREHOLDER HAVING A MAJOR INTEREST

LANSDOWNE PARTNERS LIMITED PARTNERSHIP

3) Please state whether notification indicates that it is in respect of holding of the Shareholder named in 2 above or in respect of a non-beneficial interest or in the case of an individual holder if it is a holding of that person's spouse or children under the age of 18

AS IN PARAGRAPH 2 ABOVE

Name of the registered holder(s) and, if more than one holder, the 4) number of shares held by each of them.

N/A

Number of shares/amount of stock acquired. 5)

1,000,000

Percentage of issued Class 6)

0.79%

Number of shares/amount of stock disposed 7)

N/A

8) Percentage of issued Class

N/A

9) Class of security

ORDINARY SHARES

10) Date of transaction

25 MAY 2004

11) Date company informed

27 MAY 2004

12) Total holding following this notification

7,228,500

13) Total percentage holding of issued class following this notification

5.72%

14) Any additional information

15) Name of contact and telephone number for queries

NICK PLUMMER - +44 (0)207 391 4084

16) Name and signature of authorised company official responsible for making this notification

NICK PLUMMER - GENERAL COUNSEL AND COMPANY SECRETARY

Date of Notification .... 28 MAY 2004....

 $$\operatorname{\textsc{This}}$  information is provided by RNS The company news service from the London Stock Exchange

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Company TIDM Ark Therapeutics Group PLC

Holding(s) in Company Headline Released 14:03 11 May 2004

Number 5405Y

RNS Number: 5405Y Ark Therapeutics Group PLC 11 May 2004

Schedule 10 - Notification of Major Interests in Shares

- 1. Name of Company: Ark Therapeutics Group plc
- 2. Name of shareholder having a major interest: College Retirement Equities Fund
- 3. Please state whether notification indicates that it is in respect of holding of the shareholder named in 2 above or in respect of a non -beneficial interest: As in paragraph 2 above
- 4. Name of registered holder: n/a
- 5. Number of shares acquired: n/a
- 6. Percentage of issued class: n/a
- 7. Number of shares disposed: 761,387
- 8. Percentage of issued class: 0.60%
- 9. Class of Security: Ordinary shares
- 10. Date of transaction: 12-13 April 2004
- 11. Date Company informed: 14 April 2004
- 12. Total holding following this notification:

- 13. Total percentage holding of issued class following this notification: 2.36%
- 14. Name of contact and telephone number for queries: Nick Plummer  $\,+44\,$  (0) 207 388 7722
- 15. Name of company official responsible for making this notification: Nick Plummer, Company Secretary
- 16. Date of notification: 11 May 2004

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Company TIDM Ark Therapeutics Group PLC

AKT

Headline Holding(s) in Company Released 07:36 26 Mar 2004

Number 9738W

## Ark Therapeutics Group plc 19 March 2004

## Schedule 10 - Notification of Major Interests in Shares

- 1. Name of Company:
  Ark Therapeutics Group plc
- 2. Name of shareholder having a major interest: College Retirement Equities Fund
- 3. Please state whether notification indicates that it is in respect of holding of the shareholder named in 2 above or in respect of a non-beneficial interest:

  As in paragraph 2 above
- 4. Name of registered holder: n/a
- 5. Number of shares acquired: 607,766
- 6. Percentage of issued class: 0.5%
- 7. Number of shares disposed: n/a
- 8. Percentage of issued class: n/a
- 9. Class of Security: Ordinary shares
- 10. Date of transaction: 17 18 March 2004
- 11. Date Company informed: 22 March 2004
- 12. Total holding following this notification: 3,820,235
- 13. Total percentage holding of issued class following this notification: 3.03%
- 14. Name of contact and telephone number for queries:

Martyn Williams - +44 (0) 207 391 4068

- 15. Name of company official responsible for making this notification: Martyn Williams, Finance Director
- Date of notification: 25 March 2004

END

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Company TIDM Ark Therapeutics Group PLC

AKT

Headline Interest in Shares
Released 14:59 19 Mar 2004

Number 7404W

#### 19 March 2004

## Ark Therapeutics Group plc

## Schedule 10 - Notification of Major Interests in Shares

1. Name of Company:
Ark Therapeutics Group plc

2. Name of shareholder having a major interest: Lansdowne Partners Limited Partnership

3. Please state whether notification indicates that it is in respect of holding of the shareholder named in 2 above or in respect of a non-beneficial interest:

As in paragraph 2 above

- 4. Name of registered holder:
- 5. Number of shares acquired:
- 6. Percentage of issued class: n/a
- 7. Number of shares disposed: n/a
- 8. Percentage of issued class: n/a
- 9. Class of Security: Ordinary shares
- 10. Date of transaction: 3 March 2004
- 11. Date Company informed: 4 March 2004
- 12. Total holding following this notification: 5,500,000
- 13. Total percentage holding of issued class following this notification:

- 14. Name of contact and telephone number for queries: Martyn Williams +44 (0) 207 391 4068
- 15. Name of company official responsible for making this notification: Martyn Williams, Finance Director
- 16. Date of notification: 19 March 2004

END

Company website



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#### **APPENDIX 13**

#### Miscellaneous notifications filed with the London Stock Exchange:

- (a) Announcement dated July 5, 2004 regarding result of annual general meeting.
- (b) Announcement dated June 17, 2004 regarding Trinam receipt of Orphan Medicinal Product Designation for Europe.
- (c) Announcement dated June 17, 2004 regarding receipt of EU orphan designation for Trinam.
- (d) Announcement dated June 7, 2004 regarding presentation of full analysis of second efficacy and safety study for Cerepro in malignant glioma.
- (e) Announcement dated May 28, 2004 regarding appointment of David Prince as Non Executive Director.
- (f) Announcement dated May 18, 2004 regarding agreement to supply EG005 on compassionate use for patients completing Phase II lipodystrophy syndrome trial.
- (g) Announcement dated May 11, 2004 regarding commencement of Trinam patient enrolment into Phase II study.
- (h) Announcement dated May 6, 2004 regarding Cerepro study receiving clearance from MHRA and GTAC.
- (i) Announcement dated May 5, 2004 regarding Second Cerepro efficacy and safety study results in malignant glioma to be presented at American Society of Gene Therapy.
- (j) Announcement dated April 19, 2004 regarding change of Company Secretary.
- (k) Announcement dated March 17, 2004 regarding winning drug tariff listing for Kerraboot.
- (I) Press release dated March 5, 2004 regarding completion of global offer.
- (m) Stabilisation notice dated March 3, 2004.

## Regulatory Announcement

Go to market news section

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Company

Ark Therapeutics Group PLC

TIDM

**AKT** 

Headline

**AGM Statement** 14:56 05-Jul-04

Released Number

4991A

## **Result of Annual General Meeting**

London, UK, 5 July 2004: At the Annual General Meeting of Ark Therapeutics Group plc ("Ark") (LSE: AKT), held today, all resolutions were passed.

Copies of the approved resolutions will be submitted to the UK Listing Authority and will shortly be available for inspection at the UK Listing Authorities Document Viewing Facility, which is situated at:

Financial Services Authority 25 The North Colonnade Canary Wharf London E14 5HS

Tel: +44 (0) 20 7676 1000

Dennis Turner, Chairman, commented: "We are delighted that, so early in Ark's life as a public company, management has demonstrated an ability to deliver tangible progress with the first marketed product and its lead clinical programmes. We look forward to building on these developments as we execute our plans to enhance the value of your Company."

#### **Enquiries:**

#### Ark Therapeutics Group plc

Nick Plummer, Company Secretary

+44 (0)20 7391 4084

**Financial Dynamics** 

+44 (0)20 7831 3113

**David Yates** Lucy Briggs

**Notes to Editors** 

#### Ark Therapeutics Group plc

Ark is an emerging healthcare group (the "Group") with one product introduced into hospitals and three further lead products in late stage clinical development. Capitalising on over ten years of research in vascular biology and gene-based medicine, Ark has a balanced portfolio of proprietary healthcare products targeted at specific unmet clinical needs within vascular disease and cancer. These are large and growing markets, where opportunities exist for effective new products to generate significant revenues.

Ark's products are sourced from related but largely non-dependent technologies within the Group and have been selected to enable Ark to take each product through development and to benefit from Orphan Drug Status and/or Fast Track Designation, as appropriate. The Group generally retains ownership of its product candidates throughout clinical development. Ark has secured patents or has patent applications pending for all its lead products in principal pharmaceutical markets and retains the right to market its lead products in the key North American and European markets.

Ark has its origins in businesses established in the mid-1990s by Professor John Martin and Dr Stephen Barker of University College London and Professor Seppo Ylä-Herttuala of the Al Virtanen Institute at the University of Kuopio, Finland, all of whom play leading roles in the Company's research and development programmes.

Ark's shares were successfully listed through an initial public offering on the London Stock Exchange in March 2004 (AKT.L).

This announcement includes "forward-looking statements" which include all statements other than statements of historical facts, including, without limitation, those regarding the Group's financial position, business strategy, plans and objectives of management for future operations (including development plans and objectives relating to the Group's products and services), and any statements preceded by, followed by or that include forward-looking terminology such as the words "targets", "believes", "estimates", "expects", "aims", "intends", "will", "can", "may", "anticipates", "would", "should", "could" or similar expressions or the negative thereof. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors beyond the Group's control that could cause the actual results, performance or achievements of the Group to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding the Group's present and future business strategies and the environment in which the Group will operate in the future. Among the important factors that could cause the Group's actual results, performance or achievements to differ materially from those in forward-looking statements include those relating to Ark's funding requirements, regulatory approvals, clinical trials, reliance on third parties, intellectual property, key personnel and other factors. These forward-looking statements speak only as at the date of this announcement. The Group expressly disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statements contained in this announcement to reflect any change in the Group's expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based. As a result of these factors, prospective investors are cautioned not to rely on any forward-looking statement.

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### Regulatory Announcement

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Company

Ark Therapeutics Group PLC

TIDM

Headline

EU Orphan Designation

Released

07:00 17-Jun-04

Number

8423Z

### Ark's Trinam® receives EU Orphan Designation

London, UK, 17 June 2004: Ark Therapeutics Group plc announces that it has received notification from the European Agency for the Evaluation of Medicinal Products, Committee for Orphan Medicinal Products (COMP) that Trinam®, its novel therapy to prevent blood vessels blocking after vascular graft access surgery, has received Orphan Medicinal Product Designation for Europe. EU Orphan Designation confers a number of regulatory benefits for the product including access to scientific advice, reduced regulatory fees and a 10 year period of marketing exclusivity from the date of approval. Trinam® has already been granted Orphan Designation in the US and qualifies for similar regulatory benefits and a marketing exclusivity period of 7 years.

Trinam® is a combination of a Vascular Endothelial Growth Factor (VEGF) gene in an adenoviral vector and Ark's biodegradable collagen collar local delivery device (EG001). The initial target market for Trinam® is haemodialysis access graft surgery, a treatment for kidney failure patients in which a plastic tube is grafted between blood vessels in the forearm to enable regular blood filtration. At the end of the access graft surgery procedure, the EG001 delivery device is fitted around the outside of the vein where it has been joined to the access graft. The VEGF gene in solution is then injected into the reservoir formed between the delivery device and the blood vessel, from where it passes into the blood vessel wall, transfecting the smooth muscles cells in the wall - a process known as adventitial transfection. This unique method of administration allows Trinam® to be localised to the target tissue site where the therapy is needed.

Trinam® is currently in Phase II clinical trials in the USA. The Phase II ascending dose study in up to 20 patients is designed to examine the efficacy and safety of Trinam® in patients undergoing haemodialysis access graft surgery. Trinam® was approved for Phase II/III development by the US Recombinant DNA Advisory Committee in October 2001. Pre-clinical studies have demonstrated a significant effect in preventing intimal hyperplasia and successful adventitial gene transfer.

In the US and Europe, there are an estimated 150,000 cases (Source: Ark Research) a year where Trinam® might be used. In patients fitted with haemodialysis access grafts, up to 60% of the grafts block within a year of being inserted, and repeat surgery shows more rapid failure rates. Trinam® is expected to extend the useful life of access grafts and reduce costly repeat procedures. There are currently no approved drug therapies to reduce the failure rates of access graft procedures for haemodialysis patients. The clinical need for an effective treatment is such that the National Institute of Health in the USA has highlighted it as a priority requiring a solution in the Healthy People Directive 2010.

Dr Alan Boyd, Research and Development Director of Ark, commented: "Using Trinam® to prevent the blockage of haemodialysis access grafts is a novel concept and the granting of Orphan Designation is an important validation of our science and focus on specialist areas of medicine where there is clear unmet medical need. This is good news with both

regulatory and commercial benefits and shows Ark is continuing to make progress in line with its objectives."

For further information, please contact:

Ark Therapeutics Group plc

020 7388 7722

Dr Nigel Parker, CEO

Dr Alan Boyd, Director of Development

Financial Dynamics

020 7831 3113

David Yates Lucy Briggs

Notes to Editors

**EU Orphan Medicinal Product Designation** 

EU Orphan Medicinal Product Designation may be granted to drugs intended to treat a "rare disease or condition", which is if the disease is life threatening or chronically debilitating and affects no more than 50 in 100,000 persons in the EU; where without incentive it is unlikely that the drug would generate sufficient return to justify the necessary investment; and no satisfactory method of treatment for the condition exists or, if it does, the new drug will provide a significant benefit to those affected by the condition. If a product that has an Orphan Medicinal Product Designation subsequently receives the first regulatory approval for the indication for which it has such designation, the product is entitled to orphan exclusivity, meaning that the other applications to market the same drug for the same indication may not be approved, except in certain very limited circumstances, for a period of ten years.

FDA Orphan Designation - US

Orphan Designation is granted by the FDA to drugs that are intended to treat a "rare disease or condition", which is defined as one affecting no more than 75 in 100,000 persons or fewer than 200,000 people. Orphan Designation encourages manufacturers to develop drugs intended for rare diseases by qualifying the developer for tax credits and an exclusive period of seven years during which the FDA cannot approve other applications to market the same drug for the same indication, unless superiority can be demonstrated.

Ark Therapeutics Group plc

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## **AFX UK Focus Story**

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Company

ARK THERAPEUTICS GROUP

PLC ORD 1P

TIDM

AKT

Ark Therapeutics says Trinam gets

EU Orphan Medicinal Product

designation

Released

Headline

07:42 17-Jun-04

Number

074238.17062004



LONDON (AFX) - Ark Therapeutics Group PLC announced that Trinam, its novel therapy to prevent blood vessels blocking after vascular graft access surgery, has received Orphan Medicinal Product Designation for Europe.

Ark said the approval, by the European Agency for the Evaluation of Medicinal Products, will mean the product will benefit from access to scientific advice, reduced regulatory fees and a 10-year period of marketing exclusivity from the date of approval. Trinam has already been granted Orphan Designation in the US.

'This is good news with both regulatory and commercial benefits and shows Ark is continuing to make progress in line with its objectives,' commented Dr Alan Boyd, research and development director of Ark.

etain.lavelle@afxnews.com

el/ak

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Company TIDM Ark Therapeutics Group PLC

AKT

Headline Research Update 07:00 7 Jun 2004 Released

4520Z Number

# Ark presents full analysis of second efficacy and safety study for Cerepro<sup>TM</sup> in malignant glioma: Cerepro<sup>TM</sup> well tolerated and survival time significantly increased

London, UK, 7 June 2004: Ark Therapeutics Group plc, the emerging healthcare group, has announced a full analysis of the audited results of the second efficacy and safety study (Study 903) of Cerepro<sup>TM</sup> for the treatment of patients with operable malignant glioma. The results were presented at this year's American Society of Gene Therapy (ASGT) meeting in Minneapolis on 5th June.

Study 903 was a 36 patient randomised, standard care (surgical removal of solid tumour mass with radiotherapy or chemotherapy) controlled study, blinded to the point of treatment allocation and enrolled both primary and recurrent cases of malignant glioma. On the primary survival end point (death or re-operation to prevent death), Cerepro<sup>TM</sup>, administered after surgical removal of the solid tumour mass, demonstrated an 81% increase in mean survival (from 39 weeks to 71 weeks) compared to standard care (surgical removal of solid tumour mass with radiotherapy or chemotherapy). The difference in survival was statistically significant at the p=0.0095 level (Kaplan Meier-Log rank regression). The difference in survival time remained statistically significant when study results were adjusted for the main disease prognostic factors of age, gender, tumour type, histology and Karnofski score (Cox's regression analysis). Further analyses showed that differences in median survival, twelve-month survival and overall survival in all patients, taking all causes of mortality, were also statistically significant between treated and control groups. On secondary endpoints; magnetic resonance imaging (MRI) showed tumour progression to be slowed; the adverse event profile showed Cerepro<sup>TM</sup> to be well tolerated overall and there was no evidence of deterioration in the patient's quality of life, or an increased dependency on drug maintenance during the seven-months of extended life. The safety of Cerepro<sup>TM</sup>'s adenoviral vector was reaffirmed in Study 903. Adenoviral antibody titres were initially raised in six patients and adenoviral DNA was found on day two but not thereafter in two patients. These transient increases were not associated with any adverse outcomes. The study was performed in Finland.

Cerepro<sup>TM</sup> has now completed three clinical trials to date. The first, published in Human Gene Therapy in 1998, established the dose and method of administration. Results of the second, an open label efficacy and safety study, were published in Human Gene Therapy in 2000 and showed that Cerepro<sup>TM</sup> doubled mean survival and was well tolerated.

Cerepro<sup>TM</sup>, which has Orphan Drug Status in both the US and Europe, is being developed for the treatment of patients with operable high-grade glioma, a fatal form of brain tumour. The current standard therapy involves surgically removing the solid tumour mass (when possible) and undertaking radiotherapy and/or chemotherapy. Even with the latest approved treatments, most patients die within one year of diagnosis, with average survival being about eight months. A high unmet clinical need exists for new treatments that prolong life in this devastating disease. Cerepro<sup>TM</sup> is suitable for patients with operable gliomas of which there are approximately 38,000 (source: Company research) cases each year in Europe and the USA.

Dr Nigel Parker, CEO of Ark, commented, "We are very pleased to see the full results from ASGT. They confirm those of the earlier study and support our decision to progress CereproTM's development to market. The study also demonstrates and confirms that first generation vectors can deliver significant therapeutic effects."

Dr Alan Boyd Research and Development Director of Ark commented, "These results are encouraging and reinforce our beli that Cerepro<sup>TM</sup> is a very exciting product. The consistent magnitude of effect and safety profile give the product a very good ris benefit ratio. Cerepro<sup>TM</sup> offers a significant therapeutic advance in this area of clear unmet clinical need."

For further information, please contact:

Ark Therapeutics Group plc Dr Nigel Parker, CEO

020 7388 7722

020 7831 3113

Financial Dynamics
David Yates
Lucy Briggs

#### **Notes to Editors**

## Cerepro<sup>TM</sup>

Cerepro<sup>TM</sup> is an adenoviral mediated gene-based medicine (ad.HSV-tk) given by multiple injections into the healthy brain tissue of patients, following surgical removal of the solid tumour mass. Cerepro<sup>TM</sup> induces the healthy brain cells surrounding the tumour site to express the enzyme thymidine kinase. Five days after surgery, ganciclovir is given intravenously. The thymidine kinase and ganciclovir react together to produce a substance that specifically kills dividing cells. The healthy neurones surrounding the tumour in the brain are non-dividing and are therefore not susceptible to this substance. In this way Cerepro<sup>TM</sup> harnesses healthy brain cells to help prevent a new tumour from growing.

#### Ark Therapeutics Group plc

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Company

Ark Therapeutics Group PLC

TIDM

AKT

Appointment Headline 11:24 28 May 2004 Released

Number

1994Z

#### ARK THERAPEUTICS GROUP PLC

#### APPOINTMENT OF DAVID PRINCE AS NON EXECUTIVE DIRECTOR

28 May 2004, London UK: Ark Therapeutics Group plc ("Ark" or the "Company"), the emerging healthcare group, today announces the appointment of David Prince as a Non-Executive Director and Chairman of the Audit Committee.

Mr Prince, who has over 10 years experience of operating at public company board level, was until his recent retirement Group Finance Director of Cable and Wireless.

Prior to his appointment as Group Finance Director of Cable and Wireless in July 2002, David spent 10 years working in the Hong Kong telecommunications market where he held a variety of senior board positions. From 1994 to 2000 he was Finance Director and latterly Deputy CEO of Hong Kong Telecom and played a key role in developing this business leading to the sale of the company to PCCW in 2000. He went on to join PCCW as Group CFO primarily focused on the integration of the companies following the acquisition, also completing a US \$12bn refinancing of the Group. David's early career included four years at Cable and Wireless in both General Management and Group marketing roles.

Commenting on his appointment, Dennis Turner, the Chairman of Ark, said: "I am delighted to welcome David to the Ark Board. He has an established and well-respected reputation within the financial community and brings a wealth of relevant experience in the running of technology-driven public companies. He will be a great asset to Ark in our development as a listed company and the building of our portfolio internationally."

**ENDS** 

Enquiries:

**Ark Therapeutics** 

Nigel Parker, CEO

**Financial Dynamics** 

Lucy Briggs / Ben Atwell

Tel: 0207 388 7722

Tel: 0207 831 3113

Notes to Editors Ark Therapeutics Group plc

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Ark's shares were listed through an initial public offering on the London Stock Exchange in March 2004 (AKT.L).

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Clase

Company

Ark Therapeutics Group PLC AKT

TIDM

Supply of EG005 to Patients Headline

Released

07:00 18 May 2004

7659Y Number

Ark agrees to supply EG005 on compassionate use for patients completing Phase II lipodystrophy syndrome trial

London, UK, 18 May 2004: Ark Therapeutics Group plc, the emerging healthcare group, today announces that it has agreed to supply EG005 on compassionate use grounds to allow patients completing the open label stage of its Phase II programme in in lipodystrophy to continue their treatment. Ark is currently undertaking a 50 patient blinded Phase II study in HIV patients suffering from lipodystrophy and after completing the 12 week study, patients can elect to go on a 1 year open label extension protocol. The majority of patients completing the initial Phase II study to date elected to enter the extension study. Ark's decision to make the product available on a compassionate use basis is in response to requests from the first patients completing the 1 year extension study.

Lipodystrophy occurs predominately amongst HIV-positive patients receiving highly active anti-retroviral therapy ('HAART') and is characterised by the loss of body fat on the face and limbs and its redistribution to the abdomen and back (buffalo hump). It is also characterised by adverse changes in serum lipid chemistry and metabolites and notably an increase in lactic acid, which in extreme cases can lead to death. The disorder is very distressing for patients and has been linked in a number of scientific papers to mitochondrial dysfunction. In the USA and Europe it is estimated there are approximately 1 million(1) patients receiving 'HAART' per annum, all of whom suffer from or are at risk of suffering from lipodystrophy.

EG005 is an oral therapy being developed for the treatment of lipodystrophy syndrome and preclinical work at Ark has shown that it increases the ability of mitochondria to produce energy. It is postulated that it may work in lipodystrophy by reversing or partially reversing the reported mitochondrial dysfunction. Ark is also developing the active ingredient of EG005 under the product name Vitor™ for the treatment of muscle wasting (cachexia) in cancer where it is currently in phase III clinical trials.

Dr. Alan Boyd, Research and Development Director at Ark, commented: "This is the first time EG005 has been tested in lipodystrophy in humans and the study is progressing well. It is clearly important not to read too much into any requests for continued availability of EG005 until the study is completed, the data analysed and the results available. However, it is encouraging to see patients electing to go into the open label extension protocol and where supplies are requested beyond the year, we have taken the decision to make EG005 available on compassionate use grounds so patients can continue therapy if an investigator feels it appropriate."

(1) Source: Ark Research

For further information, please contact:

Ark Therapeutics Group plc

Dr Nigel Parker, CEO

Dr Alan Boyd, Director of Development

Financial Dynamics

**David Yates** Lucy Briggs

020 7388 7722

020 7831 3113

#### **Notes to Editors** EG005

EG005 is an oral small molecule therapy being developed for the treatment of lipodystrophy, a secondary, occasionally fatal, condition commonly seen in HIV-positive patients receiving 'HAART'. The active ingredient was originally developed as a treatment for high blood pressure and is currently marketed in Japan and certain countries in Europe.

Lipodystrophy syndrome is a distressing condition characterised by the loss of body fat on the face and limbs and its redistribution to the abdomen and back. There are also additional serious metabolic abnormalities that occur with the fat redistribution, notably changes in lipid, insulin and glucose metabolism associated with an increase in acid levels in the blood (lacticacidosis). This complication reaches serious levels and unpredictably causes death in a small number of patients.

The majority of HIV-positive patients in the US and Europe are prescribed HAART. At the end of 2002 there were an estimated 940,000 patients who were HIV positive in North America and 540,000 in Europe, one quarter of which were unaware of their infection. 90 per cent of those receiving treatment for HIV/AIDS were receiving HAART and, whilst it is difficult to quantify, the Company believes that up to 80 per cent of these display symptoms of lipodystrophy, giving a target market of up to 800,000 patients. (Source: Ark research)

#### Ark Therapeutics Group plc

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Company TIDM Ark Therapeutics Group PLC

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Headline Research Update 07:00 11 May 2004

Number 5120Y

# Ark's Trinam® commences patient enrolment into Phase II study

**London, UK, 11 May 2004:** Ark Therapeutics Group plc, the emerging healthcare group, today announces that the first patient in its Phase II study for Trinam<sup>®</sup> (EG004), its novel therapy to prevent blood vessels blocking (intimal hyperplasia) after vascular graft access surgery, has received treatment with the active product. The study is taking place at Duke University Medical Centre in North Carolina, USA.

Trinam<sup>®</sup> is a combination of a Vascular Endothelial Growth Factor (VEGF) gene in an adenoviral vector and Ark's biodegradable collagen collar local delivery device (EG001). The initial target market for Trinam<sup>®</sup>, which was granted Orphan Drug Status in the USA in December 2000, is haemodialysis graft access surgery, a treatment for kidney failure patients in which a plastic tube is grafted between blood vessels in the forearm to enable regular blood filtration. At the end of the access graft surgery procedure, the EG001 collagen collar is fitted around the outside of the vein where it has been joined to the access graft. The VEGF gene solution is then injected between the wall of the collagen collar and the blood vessel. This unique unique administration of the gene localises its delivery to the target tissue site.

The Phase II study is an ascending dose study, in up to 20 patients, designed to examine the effects and safety of Trinam<sup>®</sup> in intimal hyperplasia prevention, and is expected to complete within the next 12 months. It has been approved by the US Recombinant DNA Advisory Committee and the FDA. The Pre-clinical and Phase I studies have respectively demonstrated a significant effect in preventing intimal hyperplasia, and successful adventitial (from outside the blood vessel) gene transfer.

Dr Jeff Lawson, Principal Investigator, Duke University Medical Centre, commented: "Patients requiring haemodialysis due to kidney failure already contend with constant medical intervention and frequent hospital visits. If this drug can help prolong the life expectancy of their grafts it would improve significantly the quality of life for these patients."

In the US and Europe, there are an estimated 150,000 cases(1) a year where Trinam® might be used. In patients fitted with haemodialysis access grafts, up to 60% of the grafts block within a year of being inserted, and repeat surgery shows more rapid failure rates. Trinam® is expected to extend the useful life of access grafts and reduce costly repeat procedures. There are currently no approved drug therapies to reduce the failure rates of access graft procedures for haemodialysis patients. The clinical need for an effective treatment is such that the National Institutes of Health in the USA has highlighted it as a priority requiring a solution in the Healthy People Directive 2010.

Dr Alan Boyd research and Development Director of Ark, commented: "Trinam<sup>®</sup> is a novel gene based therapy which addresses one of the major clinical problems end stage renal disease patients can face during their treatment. It has been developed by our pioneering research groups in London and Finland, through their understanding of vascular endothelial growth factor (VEGF) science and vector delivery technology. The results we have had to date are very encouraging and we are delighted to be working with Duke University and seeing this study progressing."

(1) Source: Ark Research

For further information, please contact:

**Ark Therapeutics Group plc**Dr Nigel Parker, CEO
Dr Alan Boyd, Director of Development

020 7388 7722

**Financial Dynamics** 

020 7831 3113

David Yates Lucy Briggs

#### Notes to Editors Ark Therapeutics Group plc

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Ark Therapeutics Group PLC

TIDM

Headline Research Update Released 07:00 6 May 2004

Number 3461Y

## Ark's Cerepro<sup>TM</sup> Study receives clearance from MHRA and GTAC

London, UK, 6 May 2004: Ark Therapeutics Group plc, the emerging healthcare group, today announces that it has received clearance in the UK from the Medicines and Healthcare Products Regulatory Agency (MHRA) and also full approval from the Gene Therapy Advisory Committee (GTAC) to conduct a confirmatory study of Cerepro<sup>TM</sup>, its novel gene-based medicine for operable malignant glioma (brain cancer). Cerepro<sup>TM</sup> a European and US Orphan Drug, has already completed two efficacy and safety studies producing clinically significant results in patients with this devastating disease. This confirmatory study, in up to 250 patients, is designed to provide further information on the efficacy and safety of the product.

Cerepro<sup>TM</sup> is an adenoviral mediated gene-based medicine (ad.HSV tk) given by multiple injections into the healthy brain tissue of patients, following surgical removal of the solid tumour mass. Cerepro<sup>TM</sup> induces the healthy brain cells surrounding the tumour site to express the enzyme thymidine kinase. Five days after surgery, ganciclovir is given intravenously. The thymidine kinase and ganciclovir react together to produce a substance that specifically kills dividing cells. The healthy neurones surrounding the tumour in the brain are non-dividing and are therefore not susceptible to this substance. In this way Cerepro<sup>TM</sup> harnesses healthy brain cells to help prevent a new tumour from growing. Cerepro<sup>TM</sup> is suitable for patients with operable gliomas, of which there are approximately 38,000 (1) cases each year in Europe and the USA.

Overall, Cerepro<sup>TM</sup> has completed three clinical studies to date: the first established the dose and method of administration. The second and third investigated the product's efficacy and safety. The data from the third study will be presented at the American Society of Gene Therapy (ASGT) conference on 5<sup>th</sup> June 2004. Results from the two trials published to date have been very encouraging indicating an almost doubling of average survival time, together with an acceptable safety profile.

Dr Nigel Parker, CEO of Ark, commented: "We are very pleased to have received both approvals at this time. As in the early days of monoclonal antibodies, there are all sorts of myths surrounding the difficulties of obtaining regulatory clearances for DNA-based medicines. This news should help give reassurance that the barriers are not insurmountable. The Cerepro<sup>TM</sup> results to date are extremely encouraging and the product offers new hope to malignant glioma sufferers."

Dr Alan Boyd, Research and Development Director at Ark, commented: "Clinical trials of products like Cerepro<sup>TM</sup> require dual agency approvals and the fact that we have fully satisfied both agencies in the UK is a solid endorsement of our approach to the development of these types of products, as well as the quality of Ark's science, medicine and clinical investigators. We will be performing this study internationally and will continue with the regulatory process in the various countries."

(1) Source: Ark Research

For further information, please contact:

Ark Therapeutics Group plc Dr Nigel Parker, CEO Dr Alan Boyd, Director of Development 020 7388 7722

#### **Notes to Editors**

Malignant glioma is a devastating and fatal form of brain tumour. The current standard therapy involves surgically removing the solid tumour mass (when possible) and undertaking radiotherapy and/or chemotherapy. Even with the latest approved treatments, most patients die within one year of diagnosis, with average survival being about eight months. Little therapeutic progress has been made in recent years and the prognosis for malignant glioma patients is poor. A high unmet clinical need exists for new treatments that prolong life in this devastating disease.

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Company TIDM Ark Therapeutics Group PLC

AKT

Headline Research Update Presentation

**Released** 07:00 5 May 2004

Number 2882Y



Second Cerepro<sup>TM</sup> efficacy and safety study results in malignant glioma to be presented at American Society of Gene Therapy – June 2004

London, UK, 5 May 2004: Ark Therapeutics Group plc, the emerging healthcare group, today announces that the results of its second efficacy and safety study of Cerepro<sup>TM</sup> for the treatment of patients with operable malignant glioma, will be presented at this year's annual meeting of the American Society of Gene Therapy (ASGT) in Minneapolis. The presentation, to be given by Professor Seppo Ylä-Herttuala(1), is scheduled to take place on June 5<sup>th</sup> 2004, during the Scientific Symposia Session. The ASGT annual meeting is recognised as one of the world's leading forums for the presentation of advances in gene-therapy and gene-based medicine to the medical and scientific community.

Cerepro<sup>TM</sup>, which has Orphan Drug Status in both the US and Europe, is being developed for the treatment of patients with operable high-grade glioma, a devastating and fatal form of brain tumour. The current standard therapy involves surgically removing the solid tumour mass (when possible) and undertaking radiotherapy and/or chemotherapy. Even with the latest approved treatments, most patients die within one year of diagnosis, with average survival being about eight months. Little therapeutic progress has been made in recent years and the prognosis for malignant glioma patients is poor. A high unmet clinical need exists for new treatments that prolong life in this devastating disease. Cerepro<sup>TM</sup> is suitable for patients with operable gliomas of which there are approximately 38,000(2) cases each year Europe and the USA.

Cerepro<sup>TM</sup> has completed three clinical trials to date, the first published in Human Gene Therapy in 1998, established the dose and method of administration. The second, an open label efficacy and safety study, was published in Human Gene Therapy in 2000. At ASGT, the data will be presented from the third trial, a randomised, controlled, efficacy and safety study. The results of the two trials published to date have been very encouraging, almost doubling glioma patient's average survival times and demonstrating an acceptable safety profile.

Dr Nigel Parker, CEO of Ark, commented: "Naturally we are very pleased that the Cerepro<sup>TM</sup> data will be presented at ASGT - we could not have wished for a better forum. It is a very exciting product and the results to date are not only encouraging in their own right, but they also give an indication of the significant contribution gene-based medicines could make to improving clinical outcomes in areas of unmet clinical need. We look forward to seeing the full trial results being presented on the day."

- (1) Prof. YlaHerttuala is Consultant Director of Molecular Medicine to Ark Therapeutics plc.
- (2) Source: Ark Research

For further information, please contact:

Ark Therapeutics Group plc Dr Nigel Parker, CEO

Dr Alan Boyd, Director of Development

Financial Dynamics David Yates Lucy Briggs 020 7388 7722

020 7831 3113

Notes to Editors Cerepro<sup>TM</sup>

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Ark Therapeutics Group PLC

TIDM Headline AKT

Change of Company Secretary

Released

07:00 19 Apr 2004

Number 7158X

#### ARK THERAPEUTICS GROUP PLC

#### **CHANGE OF COMPANY SECRETARY**

**19 April 2004, London UK:** Ark Therapeutics Group plc ("Ark" or the "Company"), the emerging healthcare group, today announces that Martyn Williams, the Company's Chief Financial Officer, has handed over his company secretarial duties to Nick Plummer, the newly appointed General Counsel. Nick becomes Company Secretary as of today.

Prior to joining Ark on 13<sup>th</sup> April 2004, Nick Plummer LLB, aged 33, worked as a corporate lawyer for over eight years at the international law firm Ashurst.

**ENDS** 

**Enquiries:** 

**Ark Therapeutics** 

Martyn Williams, Chief Financial Officer

Tel: 0207 388 7722

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Company TIDM Headline Ark Therapeutics Group PLC AKT
Kerraboot Drug Tariff Listing

**Released** 07:00 17 Mar 2004

Number 6095W

# Ark wins Drug Tariff listing for Kerraboot®

**17 March 2004, London UK:** Ark Therapeutics Group plc, the emerging healthcare group, today announces that it has received Drug Tariff approval for Kerraboot<sup>®</sup>. The novel wound management device for leg and foot ulcers has received approval at £14 per Kerraboot<sup>®</sup>, and will be listed in the Drug Tariff from 1st May 2004, allowing it to be prescribed on the NHS for patients in the community.

Kerraboot<sup>®</sup> provides a new approach to the management of foot and leg ulcers in the form of an easy to apply non-pressurised boot-like dressing. Lower leg and foot ulceration affects 15%<sup>10</sup> of diabetics in the UK and approximately 1% of the adult population<sup>9</sup>. The global market for wound care products was in excess of \$5.8 billion<sup>8</sup> in 2002 and is predicted to grow to over \$7 billion<sup>8</sup> by 2008, yet despite the range of current treatments there is still a large unmet need for effective treatment options in this area of therapy.

Studies have shown Kerraboot® to be comfortable, quick to change and pain free. The design incorporates a number of advanced medical device materials that generate a warm, moist environment for healing, while facilitating the draining and isolation of exudates from the ulcerated area. Substances such as matrix metalloproteases, which inhibit angiogenesis, are reduced, allowing natural growth factors, such as Vascular Endothelial Growth Factors (VEGF), to stimulate healing. Studies have shown that Kerraboot® reduces ulcer size by up to 60% over a four week period and provides an effective barrier against wound odour, a common and embarrassing problem for patients.

Kerraboot<sup>®</sup> is extremely cost effective and could potentially reduce treatment costs by as much as 40% over a twelve week period, particularly for patients who usually require multiple dressings for their ulcer. Managing leg and foot ulcers in the community constitutes a significant proportion of the district nurse workload - it has been estimated that around 22% of their time is spent in this area<sup>1</sup>. It has been calculated<sup>2</sup> that the average cost of each visit made by a community-based nurse is £53. It is expected that the majority of patients will be able to change Kerraboot<sup>®</sup> themselves, resulting in a significant positive impact on community nursing time and costs. Kerraboot<sup>®</sup> may also be able to replace multiple dressing items often currently used on each patient, thereby saving further NHS costs.

In clinical studies<sup>3</sup> covering a range of patients and ulcer types, Kerraboot<sup>®</sup> has been shown to reduce the nursing time required to change ulcer dressings by an average of 70%. In the case of one individual patient, this meant a dressing change time of only 2 minutes with Kerraboot<sup>®</sup> compared to an estimated average of 30 minutes for standard dressings, this is a time reduction of around 83%.

Healthcare professionals and patients have welcomed the Drug Tariff Listing for Kerraboot<sup>®</sup>. Commenting on this news, Ali Foster, Lead Clinical Specialist Podiatrist at The Diabetic Foot Clinic, King's College Hospital, London, said: "The management of leg and foot ulcers in the UK places a huge burden on NHS resources and new approaches to ease this burden such as Kerraboot<sup>®</sup> are welcomed. Its unique design allows easy inspection of the wound, which is a real benefit for healthcare professionals and patients. Availability of Kerraboot<sup>®</sup> in the community as well as hospitals will allow the continuity of care that is so vital to achieving good outcomes for patients."

Dr. Nigel Parker, CEO of Ark, commented: "We are delighted that Kerraboot® has received NHS Drug Tariff approval at a price in line with our expectations. The listing highlights the importance of Kerraboot® in its ability to improve patient outcomes reducing the cost of care. Kerraboot® was introduced into hospitals late last year and has had a very encouraging response to

date. We now plan to increase our sales focus and service the key accounts in the community."

#### -Ends-

For further information please contact:

Ark Therapeutics 020 7388 7722

Dr Nigel Parker, Chief Executive Paul Higham, Director of Commercial Development

**Financial Dynamics** 

 David Yates
 0207 269 7242

 Lucy Briggs
 0207 269 7223

#### **Notes to Editors:**

## Kerraboot<sup>®</sup>

- Of the estimated 1.2 million people with diabetes in the UK, up to 10% are affected by foot ulceration at any one time and in the majority of cases (90%), diabetic neuropathy is an underlying factor <sup>4</sup>.
- Ultimately 25%<sup>5</sup> of patients will end up having some form of lower limb amputation which equates to half of all lower limb amputations in the UK.
- Each year nearly 5 000 lower limb amputations take place in the UK at an estimated cost to the NHS of £38 million<sup>6</sup>.
- Venous leg ulcers may affect up to 3.5% of the general population at some stage in their life<sup>7</sup>. Compression bandaging is the standard practice involving
  costly dressings and highly trained nursing skills. However, a significant proportion of venous ulcer patients are unable to tolerate compression therapy or
  have ulcers that are inappropriate for this form of treatment.
- Kerraboot has been available in UK hospitals since November 2003, and was listed as a medical device by the FDA in December 2003.

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Ark Therapeutics Group PLC AKT

TIDM Headline

Doc re. Global Offer 15:49 5 Mar 2004

Released Number

2102W

Ark Therapeutics Group plc

Global Offer of 41,555,996 ordinary shares of 1 pence each

Copies of the listing particulars, which were published on 3 March 2004, are available for inspection only at the Document Viewing Facility of the Financial Services Authority, 25 The North colonnade, Canary Wharf, London E14 5HS

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Company TIDM Credit Suisse First Boston Europe

Headline Released Number

Stabilisation Notice 07:39 3 Mar 2004

er 0731W

Stabilisation Notice Ark Therapeutics Group plc

Credit Suisse First Boston (Europe) Limited notifies you that it is the stabilising manager and may conduct stabilising activities in relation to the following security:

Ark Therapeutics Group PLC Ordinary Shares GB0034251727

CSFB confirms the following:

- 1. The security to be stabilised is Ark Therapeutics Group plc Ordinary Shares
- 2. The stabilising manager is Credit Suisse First Boston (Europe) Limited (contacts: Tom Ahearne/Nick Williams Telephone: 020 7888 3818);
- 3. The stabilisation period is expected to commence at 8.00am on 3<sup>rd</sup> March 2004 until close of business on 2<sup>nd</sup> April 2004 inclusive;
- 4. The issue price of Ark Therapeutics Group plc Ordinary shares was set at GBP 1.33 on 3rd March 2004

Stabilisation/FSA

END

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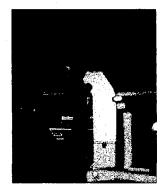
### **APPENDIX 14**

Annual Report for the year ended December 31, 2003.











Ark Therapeutics Group plc 2003 Accounts

Recent nightights and key strengths

## **Recent Highlights**

- > Cerepro<sup>™</sup> Study receives clearance from MHRA and GTAC. Second efficacy and safety results to be presented at American Society of Gene Therapy in June.
- > First patient treated in Trinam® Phase II study.
- > Ark wins Drug Tariff listing for Kerraboot®.
- > Head of Bayer Pharmaceuticals and ex-Group Finance Director of Cable and Wireless join Ark board as nonexecutive Directors.
- > Ark agrees to supply EG005 on compassionate use.

## Key strengths

## Attractive product portfolio

Ark's portfolio includes three lead candidates in late stage trials and one product that was introduced into UK hospitals in November 2003, in respect of which initial revenues have commenced.

## Portfolio profile designed to mitigate risk

Ark's portfolio incorporates a mix of late-stage technology products and devices, from non-dependent scientific platforms, with a strong follow-on pipeline.

## Retained marketing rights

Ark has avoided the need to secure development partners for its lead products thereby retaining development control and commercial rights.

## Exceptional scientific base

Ark's scientists are recognised as world-class in their fields of cardiovascular medicine and clinical gene-based medicine, giving the Group access to leading edge scientific discovery research.

## Management's ability to convert science into products

Ark's current portfolio has been built by a management team that has a proven record in bringing products to market. Rigorous screening of Ark's rich output of scientific innovation prioritises those opportunities where a clear development path to market in a commercially valuable indication can be identified.

Business strategy

Capitalising on over ten years of research in vascular biology and gene-based medicine, Ark has created a balanced portfolio of proprietary healthcare products. In the large and growing markets of vascular disease and cancer, opportunities exist for effective new products to generate significant revenues.

In order to maximise the return to shareholders, the Company's strategy is to:

- > address areas of clear unmet clinical need;
- > focus on specialist areas of medicine;
- > employ world-class science; and
- > retain product ownership and control.

#### Letter from the Chairman and Chief Executive Officer

#### Dear Shareholder

As you are aware, the initial public offering of your Company was successfully completed on 8 March 2004, when Ark's shares were admitted to the Official List of the UK Listing Authority and to trading on the London Stock Exchange. This was an important milestone in the development of the Company and we would like to take the opportunity to thank those who planned and executed this financing, but in particular those who invested their money and their confidence in the future of Ark as an emerging health care company and as a vehicle for creating shareholder value in this sector.

This letter is to advise you that the Company will hold its first annual general meeting as a listed company at 12.15 p.m. on 5 July 2004 at the offices of the Company's solicitors, Ashurst, at Broadwalk House, 5 Appold Street, London EC2A 2HA and you are cordially invited to attend. You will find further details of the meeting, and the resolutions to be put to shareholders, in the notice of annual general meeting at page 35 and on the enclosed form of proxy.

We are also attaching for ready reference the Company's audited accounts for the year ended 31 December 2003, throughout which period the Company was a private company. These accounts were adopted and signed on behalf of the board on 3 March 2004 and were used for the purposes of preparing the financial information set out in the IPO Listing Particulars dated 3 March 2004.

As Ark was not a listed company for any of the period to which the accounts relate, and given the very substantial disclosure set out in the Listing Particulars, the Company is not required to prepare the normal pic-style annual report for shareholders this year. Our first formal annual report will therefore be sent to you with the full year 2004 accounts in the first half of 2005.

Since the Listing Particulars were issued, there have been a number of important developments, set out in recent press releases, which confirm the significant progress made by the Company in achieving key business milestones. We thought it would be helpful if we summarise these in the balance of this letter.

In mid-March we announced that Kerraboot®, the Company's novel wound management device for leg and foot ulcers, had received Drug Tariff approval at a price of £14 with effect from 1 May, enabling the Kerraboot® to be prescribed by GPs on the NHS. This is a large market, with 1% of the UK's adult population suffering from lower leg and foot ulceration at some stage in their lives. The Company believes that Kerraboot®'s effectiveness in managing leg ulcers, coupled with its ease of use and its significant demonstrated cost savings, has great potential to satisfy an unmet need for cost-effective treatment in this area of therapy. We are now expanding our sales efforts to service the full range of accounts in the British medical community.

Two important announcements were made in May concerning Cerepro™, the Company's treatment for patients with operable malignant glioma (a common form of brain tumour). The results of the third clinical trial of this product will be presented on 5 June at the annual meeting of the American Society of Gene Therapy, one of the world's leading forums for the presentation of advances in gene-based medicine. The results of the two trials published to date have been very encouraging, almost doubling patients' average survival times. We also announced that clearance had been received in the UK from the Medicines and Healthcare Products Regulatory Agency, together with full approval from the Gene Therapy Advisory Committee, to conduct a confirmatory study. As Nigel Parker noted at the time of that announcement "as in the early days of monoclonal antibodies, there are all sorts of myths surrounding the difficulties of obtaining regulatory clearances for DNA-based medicines. This news should help give reassurance that the barriers are not insurmountable.".

There was good news as well in the Company's Trinam® Programme, the novel therapy to prevent blood vessels blocking after vascular graft access surgery, with the first patient receiving treatment in the Phase II study. This study has been approved by the US Recombinant DNA Advisory Committee and the FDA and is designed to examine the effects and safety of Trinam®.

In mid-May the Company announced a positive development in its EG005 Phase II study programme in HIV patients suffering from lipodystrophy, the fat metabolism disorder affecting HIV-positive patients receiving highly active anti-retroviral therapy. In response to requests from the first patients completing the one year open label extension protocol stage of this programme, we have taken the decision to make the product available on a compassionate use basis so that patients can continue therapy where appropriate.

The high calibre of the non-executive Directors who have recently strengthened the Ark board reflects the progress your Company is making. In December, Dr Wolfgang Plischke, head of the Global Pharmaceuticals Division of Bayer, joined the board and we recently announced the appointment of David Prince, ex-Group Finance Director of Cable and Wireless plc, as non-executive Director and Chairman of the Audit Committee. We are very pleased that two non-executive Directors so experienced in their respective fields have accepted our invitation to join us.

We are delighted that, so early in Ark's life as a public company, management has demonstrated an ability to deliver tangible progress with the first marketed product and its lead clinical programmes. We look forward to building on these developments as we execute our plans to enhance the value of your Company.

Dennis Turner, Chairman

4 June 2004

Dr. Nigel Parker, Chief Executive Officer

The following pages, 5 to 34, set out the statutory financial statements of Ark Therapeutics Group plc for the year ended 31 December 2003.

The financial statements were approved by the Directors and signed on 3 March 2004, the date of issue of the Listing Particulars relating to the initial public offering of shares in the Company, on which date the auditors' report on those financial statements was also signed.

The following changes have occurred since 3 March 2004:

- Professor John Martin and Dr Kalevi Kurkijarvi resigned from the board on 8 March 2004;
- the changes to the Company's share capital, as summarised under "Post Balance Sheet events" on page 5, became effective on 8 March 2004;
- Martyn Williams handed over his company secretarial duties to Nick Plummer, the Company's newly-appointed General Counsel, on 13 April 2004; and
- David Prince was appointed as a non-executive Director and Chairman of the Audit Committee on 26 May 2004.

The information set out on pages 1 to 4, pages 35 & 36 and on the inside front cover, does not form a part of the financial statements approved by the Directors and is, therefore, not covered by the audit report.

#### Air merapeutics droup pic

(formally Ark Therapeutics Group Limited)

# Report and Financial Statements 31 December 2003

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## Directors and their interests

The Directors who held office during the year and their interests in the shares of the company were as follows:

		Preference shares		
Control Control		31 December 2002		31 December 2002
	31 December 2003	(or date of appointment)	31 December 2003	(or date of appointment)
D M J Turner	-	_	40,541	. 40,541
Dr N R Parker	-	_	13,514	13,514
M D Williams	50,000	50,000	20,135	20,135
P S Keen	· -	_	-	_
Dr K Kurkijarvi	-	-	-	-
Professor J F Martin	-	-	362,734	362,734
Sir Mark Richmond	· .	_	-	_
Dr G N Vemon	-	_	13,518	13,518
Professor S Ylä-Herttuala	-	_	2,216,179	2,216,179
Dr W Plischke		_	_	_

Dr G N Vemon resigned as a Director of the company on 16 July 2003. Dr W Plishcke was appointed on 9 November 2003. Professor J F Martin and Dr K Kurkijarvi resigned as Directors as at the date of Listing.

Dr N R Parker's interests in the ordinary shares are held by Brecon Holdings Limited. The interests of Dr G N Vernon are held by Ziggus Holdings Limited.

The Directors' interests in the share options of Ark Therapeutics Limited are disclosed in the accounts of that company.

## Directors and their interests (continued)

The Directors who held office during the year had options to acquire shares in the company as follows:

	Number at 31 December 2002	Granted	Cancelled	Number at 31 December 2003	Exercise price	Date from which exercisable	expiry date
P S Keen	60,000	_		60,000	1.3800	24/5/01	23/5/2011
Sir Mark Richmond	60,000			60,000	1.3800	24/5/01	23/5/2011
Professor J Martin	175,000	-		175,000	0.6000	19/4/2000 **	18/4/2010
	25,000	_	_	25,000	1.0000	25/4/2000 **	24/4/2010
	75,000	-	-	75,000	1.3800	24/5/2001 **	23/5/2011
	50,000	-	-	50,000	1.4800	21/3/2002 **	20/3/2012
	_	25,000		25,000	1.0000	24/9/2003 **	23/9/2013
Professor S Ylä-Herttuala	35,000	-	_	35,000	1.0000	19/4/2000 **	18/4/2010
	30,000	_	-	30,000	1.4800	21/3/2002 **	20/3/2012
		25,000	-	25,000	1.0000	24/9/2003 **	23/9/2013
Dr N Parker	250,000	-	-	250,000	0.0002	*	31/8/2008
	504,404	_	-	504,404	1.0000	*	24/4/2010
	130,000	-	_	130,000	0.0002	*	24/4/2010
	214,000	_	_	214,000	1.3800	24/5/2001 **	23/5/2011
	200,000	_	`\	200,000	1.4800	21/3/2002 **	20/3/2012
	-	175,000		175,000	1.0000	24/9/2003 **	23/9/2013
M D Williams	150,000	-	\-	150,000	0.6000	*	5/12/2009
	75,000	_	-	75,000	1.0000	*	24/4/2010
	75,000	-	_	75,000	1.0000	25/4/2000 **	24/4/2010
	100,000	-	_	100,000	1.3800	24/5/2001 **	23/5/2011
	72,729	-	-	72,729	1.4800	21/3/2002 **	20/3/2012
	27,271	-		27,271	1.4800	4/4/2002 **	3/4/2012
	_	90,000	_	90,000	1.0000	24/9/2003 **	23/9/2013
G Vernon	60,000	_		60,000	1.3800	24/5/2001	23/5/2011
Dr K Kurkijarvi	60,000			60,000	1.3800	24/5/2001	23/5/2011
D Turner	200,000	_	-	200,000	1.0000	28/4/2000	5/12/2009
	60,000	_	-	60,000	1.3800	24/5/2001	23/5/2011
	85,000			85,000	1.0000	25/4/2001	24/4/2010
	2,773,404	315,000	-	3,088,404			

<sup>\*</sup> Exercisable on trade sale or listing

P S Keen holds his options on trust for Merlin General Partner Limited, as general partner of the Merlin L.P. Professor S Ylä-Herttuala and Dr K Kurkijarvi retained options over shares in Ark Therapeutics Limited, but, under an agreement dated 12 July 2002 between Ark Therapeutics Limited, the Company and the individuals, on any exercise of options the Ark Therapeutics Limited shares subject to option shall be issued directly to the Company and the Company shall issue the equivalent number of its shares to the individual.

<sup>\*\*</sup> Exercisable over four years in equal installments

## Consolidated profit and loss account

year ended 31 December 2003

		Year ended 31 December 2003	Year ended 31 December 2002
	Notes	<u> </u>	<u>£</u>
Turnover	2	1,847	-
Cost of sales		(644)	_
Gross profit		1,203	-
Research and development		(5,368,766)	(5,020,879)
		(5,367,563)	(5,020,879)
Marketing costs		(318,710)	
Other administrative expenses		(4,225,520)	(4,035,942)
Share-based compensation		593,691	1,156,050
Administrative expenses	3	(3,950,539)	(2,879,892)
Other operating income		108,870	14,517
Operating loss	2	(9,209,232)	(7,886,254)
Interest receivable			
and other similar income	4	457,640	764,680
Loss on ordinary activities			
before taxation	2,5	(8,751,592)	(7,121,574)
Tax on loss on ordinary activities	7	650,949	1,398,818
Loss on ordinary activities after			
taxation, being retained			
loss for the financial year	19,20	(8,100,643)	(5,722,756)
Loss per share (basic and diluted)	9	(0.10)	(0.07)

All activities derived from continuing operations.

The loss per share is based on the weighted average number of shares adjusted to reflect the restructuring of share capital on Listing of the company (see note 28) and is presented as if the share restructuring had happened at the beginning of the period under review.

## Consolidated statement of total recognised gains and losses

year ended 31 December 2003

	Year ended 31 December 2003 £	Year ended 31 December 2002 £
Loss for the financial year	(8,100,643)	(5,722,756)
Currency translation losses on foreign currency net investments	(12,741)	(6,277)
Total recognised gains and losses relating to the year	(8,113,384)	(5,729,033)

			Year ended 31 December 2003	Year ended 31 December 2002
·	Notes		£	£
Fixed assets	•			
Intangible assets	10		1,306,091	2,559,935
Tangible assets	11		834,838	682,040
Investments	12		<b>*</b>	235
			2,140,929	3,242,210
Current assets				
Stocks	13		9,200	
Debtors	14		1,017,536	1,458,480
Cash at bank and in hand			9,157,565	15,889,104
			10,184,301	17,347,584
Creditors: amounts falling due				
within one year	15		(2,582,764)	(2,244,988)
Net current assets			7,601,537	15,102,596
Total assets less current liabilitie	es		9,742,466	18,344,806
Creditors: amounts falling due				
after more than one year	16	\_	(486,808)	(382,073)
Net assets	2		9,255,658	17,962,733
Capital and reserves				
Called up share capital	18		57,751	57.751
Merger reserve	19		36,988,989	36,988,989
Profit and loss account	19		(27,791,082)	
Shareholders' funds	20		9,255,658	17,962,733
Shareholders' funds may be an	alysed as:			
Equity interests			9,205,658	17,912,733
Non-equity interests			50,000	50,000
			9,255,658	17,962,733

These financial statements were approved by the board of Directors on 3 March 2004 Signed on behalf of the board of Directors

Dr N R Parker, Director 3 March 2004

## Balance sheet

year ended 31 December 2003

		Year ended 31 December	Year ended 31 December
	•	2003	2002
	Notes	ε	£
Fixed assets			
Investments	12	8,229	7,751
Sulf file size			
Current assets			
Debtors	14	50,000	50,000
Cash at bank and in hand		26,288	11,056
		76,288	61,056
Creditors: amounts falling du	e		
within one year	15	(24,478)	(10,000)
Net current assets		51,810	51,056
Total assets less current liab	lities,		
being net assets		60,039	58,807
Capital and reserves			
Called up share capital	18	57,751	57,751
Profit and loss account	19	2,288	1,056
Equity Shareholders' funds		60,039	58,807
Shareholders' funds may be	analysed as:		
Equity interests		10,039	8,807
Non-equity interests		50,000	50,000
		60,039	58,807

These financial statements were approved by the board of Directors on 3 March 2004 Signed on behalf of the board of Directors

Dr N R Parker, Director

3 March 2004

## Consolidated cash flow statement

year ended 31 December 2003

	Notes	Year ended 31 December 2003 £	Year ended 31 December 2002 £
Net cash outflow from			
operating activities	21	(8,114,251)	(7,433,678)
Returns on investments and			
servicing of finance	22	457,640	764,680
Taxation	22	1,033,813	365,954
Capital expenditure and		-	
financial investment	22	(256,661)	(582,189)
Cash outflow before financing		(6,879,459)	(6,885,233)
Financing	22	169,916	254,164
Decrease in cash in the year	23	(6,709,543)	(6,631,069)

### 1 Accounting policies

A summary of the principal accounting policies, all of which have been applied consistently throughout the year and the preceding year, is set out below.

#### Basis of accounting

The financial statements have been prepared under the historical cost convention and in accordance with applicable accounting standards.

#### Basis of consolidation

The group financial statements consolidate the financial statements of the company and its subsidiary undertakings drawn up to 31 December each year.

#### Corporate restructuring

During 2002, the group carried out a corporate restructuring consisting of the introduction of a new holding company. On 24 April 2002 the company acquired the entire issued ordinary share capital of Ark Therapeutics Limited in exchange for the issue of shares to shareholders on a one-for-one basis. The restructuring represented a change in the identity of the holding company rather than an acquisition of the business. Consequently, the restructuring has been accounted for using merger accounting principles.

Under merger accounting, the results of the company and Ark Therapeutics Limited are combined from the beginning of the financial period in which the merger occurred. Profit and loss account and balance sheet comparatives are restated on the combined basis and adjustments are made to achieve consistency of accounting policies where necessary.

The company has applied section 131 of the Companies Act 1985 and recorded the investment in Ark Therapeutics Limited at the nominal value of shares issued.

On 15 August 2002 Ark Therapeutics Group plc was reregistered as a private company, Ark Therapeutics Group Limited and on 25 February 2004 the company was reregistered as a public limited company.

#### Other acquisitions

Other than in respect of the corporate restructuring above, the results of subsidiaries acquired or sold are consolidated for the periods from or to the date on which control passed. Acquisitions are accounted for under the acquisition method.

#### Intangible fixed assets - Goodwill

Goodwill arising on the acquisition of subsidiary undertakings and businesses, representing any excess of the fair value of the consideration given over the fair value of the identifiable assets and liabilities acquired, is capitalised and written off on a straight line basis over its useful economic life. Provision is made for any impairment.

#### Research and development

Research and development expenditure is written off as incurred.

#### Tangible fixed assets

Tangible fixed assets are stated at cost, net of depreciation and provision for impairment. Depreciation is provided on all tangible fixed assets, at rates calculated to write off the cost, less estimated residual value, of each asset on a straight line basis over its expected useful life, as follows:

Leasehold improvements 20 per cent. per annum or the life of the lease

Laboratory equipment Office equipment

20 per cent. per annum 33 per cent. per annum

#### Foreign exchange

Transactions of the company denominated in foreign currencies are translated into sterling at the rates ruling at the dates of the transaction or, if hedged, at the forward contract rate. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are translated at the rates ruling at that date or, if appropriate, at the forward contract rate.

The results of overseas operations are translated at the average rates of exchange during the period and their balance sheets at the rates ruling at the balance sheet date. Exchange differences arising on translation of the opening net assets and results of overseas operations and on foreign currency borrowings are reported in the statement of total recognised gains and losses. All other exchange differences are included in the profit and loss account.

#### Leases

Assets held under finance leases, which confer rights and obligations similar to those attached to owned assets, are capitalised as tangible fixed assets and are depreciated over the shorter of the lease terms and their useful lives. The capital elements of future lease obligations are recorded as liabilities, while the interest elements are charged to the profit and loss account over the period of the leases to produce a constant rate of charge on the balance of capital repayments outstanding. Hire purchase transactions are dealt with similarly, except that assets are depreciated over their useful lives.

Rentals under operating leases are charged on a straightline basis over the lease term, even if the payments are not made on such a basis.

#### Taxation

Current tax, including UK corporation tax and foreign tax, is provided at amounts expected to be paid (or recovered) using the tax rates and laws that have been enacted by the balance sheet date.

Deferred tax is recognised in respect of all timing differences that have originated but not reversed at the balance sheet date where transactions or events that result in an obligation to pay more tax in the future or a right to pay less tax in the future have occurred at the balance sheet date. Timing differences are differences between the Company's taxable profits and its results as stated in the accounts that arise from the inclusion of gains and losses in tax assessments in periods different from those in which they are recognised in the accounts.

A net deferred tax asset is regarded as recoverable and therefore recognised only when, on the basis of all available evidence, it can be regarded as more likely than not that there will be suitable taxable profits from which the future reversal of the underlying timing differences can be deducted.

Deferred tax is measured at the average tax rates that are expected to apply in the periods in which the timing differences are expected to reverse, based on tax rates and laws that have been enacted or substantively enacted by the balance sheet date. Deferred tax is measured on a non-discounted basis.

#### Debt

Debt is initially stated at the amount of the net proceeds after deduction of issue costs. The carrying amount is increased by the finance cost in respect of the accounting period and reduced by payments made in the period.

### Related party transactions

Under the provisions of Financial Reporting Standard No 8 'Related party transactions', the company is not required to disclose details of related party transactions with its wholly owned subsidiaries, which are eliminated on consolidation.

#### Investments

Fixed asset investments are shown at cost less provision for impairment.

#### Stocks

Stocks are stated at the lower of cost and net realisable value.

#### Pension costs

The group makes contributions to employees' personal pension plans. The amount charged to the profit and loss account in respect of pension costs is the contribution payable in the year. Differences between contributions payable in the year and contributions actually paid are shown as either accruals or prepayments in the balance sheet.

#### Government grants

Government grants relating to tangible fixed assets are treated as deferred income and released to the profit and loss account over the expected useful lives of the assets concerned. Other grants are credited to the profit and loss account as the related expenditure is incurred.

#### Employee share option schemes

In accordance with Urgent Issues Task Force Abstract 17 "Employee share schemes", the cost of awards to employees that take the form of shares or rights to shares is recognised as a charge to the profit and loss account. The amount received, which is the difference between the market value at the date of grant and any exercise price, is charged to the profit and loss account over the period the shares are vested, with a corresponding credit to reserves.

#### Derivative financial instruments

The group uses derivative financial instruments to reduce exposure to foreign exchange risk. The group does not hold or issue derivative financial instruments for speculative purposes.

For a forward foreign exchange contract to be treated as a hedge the instrument must be related to actual foreign currency assets or liabilities or to a probable commitment. It must involve the same currency or similar currencies as the hedged item and must also reduce the risk of foreign currency exchange movements on the group's operations. Gains and losses arising on these contracts are deferred and recognised in the profit and loss account, or as adjustments to the carrying amount of fixed assets, only when the hedged transaction has itself been reflected in the group's financial statements.

If an instrument ceases to be accounted for as a hedge, for example because the underlying hedged position is eliminated, the instrument is marked to market and any resulting profit or loss recognised at that time.

## Notes to the accounts

year ended 31 December 2003

## 2 Segment information

There is only one class of business, which is the discovery, development and commercialisation of products in areas of specialist medicine with particular focus on vascular disease and cancer.

The analysis of operating loss, loss before taxation and the net assets of the group by geographical segment is as follows:

			31	Year ended December 2003
	UK £	Finland £	US £	Total £
Operating loss	(7,222,401)	(1,731,455)	(255,376)	(9,209,232)
Loss before taxation	(6,767,838)	(1,728,348)	(255,376)	(8,751,592)
Net assets	9,297,360	57,820	(99,522)	9,255,658

•			Year ended 31 December 2002	
	UK £	Finland £	US £	Total £
Operating loss	(6,632,625)	(1,253,629)	_	(7,886,254)
Loss before taxation	(5,861,265)	(1,260,309)		(7,121,574)
Net assets	17,947,398	15,335		17,962,733

### 3 Administrative expenses

The share-based compensation credit in 2002 of £1,156,050 arose from revision of the assumptions within the calculation of the share-based compensation provision to include both shares in issue and shares to be issued and is in respect of shares or share options which have been granted or will be granted or issued at less than fair value on listing on a recognised stock exchange. These share options are exercisable upon the listing of the company on a recognised stock exchange.

The share-based compensation credit of £593,691 in the year ended 31 December 2003 arose from a further reassessment of the expected number of share options to be granted or shares to be issued on listing.

Administrative expenses include £nil (2002 - £792,931) of exceptional expenses incurred in connection with the company's application for listing on the London Stock Exchange in 2002. In May 2002, the Directors decided to postpone the application.

#### 4 Finance income

	2003 £	2002 £
Bank interest	457,640	764,680

## 5 Loss on ordinary activities before taxation

	£ 2003	2002 £
Loss on ordinary activities before taxation is after charging:		
Depreciation:		
Owned assets	144,612	.80,950
Held under finance leases	11,338	4,740
Amortisation of goodwill	1,253,844	1,253,842
Auditors' remuneration		
To Deloitte & Touche LLP for audit services	18,000	14,000
To Deloitte & Touche LLP for non-audit services	122,198	10,000
To Arthur Andersen for audit services	-	4,210
To Arthur Andersen for non-audit services	·	188,767
Operating lease rentals		
Plant and machinery	11,708	4,763
Property	233,844	139,782
Government grants	(115,907)	(11,646)

The audit fees in respect of the company are borne by its wholly owned subsidiary undertaking, Ark Therapeutics Limited.

## 6 Information regarding Directors and employees

The total amounts for directors' remuneration were as follows:

				2003	2002
				£	£
Directors' remuneration					
Emoluments				621,668	608,419
Money purchase pension contributions				32,200	29,250
				653,868	637,669
Directors' emoluments				<del></del> -	
		Benefits		2003	2002
	Fees	in kind	Bonus	total	total
	€	£	£	£	£
Executive	*				
Professor J Martin	37,500	-	-	37,500	37,500
Professor S Ylä-Herttuala	50,000	_	-	50,000	50,000
Dr N Parker	196,000	1,260	73,600	270,860	261,108
M D Williams	148,000	1,008	48,300	197,308	195,311
	431,500	2,268	121,900	555,668	543,919

## 6 Information regarding Directors and employees (continued)

#### Directors' emoluments

	Fees £'000	Benefits in kind £'000	Bonus £'000	2003 total £'000	2002 total £'000
Non-executive					
P S Keen	-	_	-	-	-
Sir Mark Richmond	12,500	_	-	12,500	12,500
G Vernon	-	_	-	-	-
Dr K Kurkijarvi	12,500	-	-	12,500	12,500
D Turner	41,000	-	-	41,000	39,500
Dr W Plischke		-			
	66,000		-	66,000	64,500
				621,668	608,419

Fees paid to third parties for the services of PS Keen were £12,500 (2002 - £12,500), for the services of Dr GN Vernon were £7,294 (2002 - £12,500) and for W Plischke were £2,084 (2002 - £nil).

Pension contributions were made into personal pension plans on behalf of two Directors (2002 - two) as follows:

	2003 £	2002 £
Dr N Parker	18,400	15,937
M D Williams	13,800	13,313
	32,200	29,250
Further details of Directors' interests and options are included within the Directors' report.	2003 No	2002 No

	2003 No	2002 No
The average monthly number of employees (including executive Directors) was:	<del></del>	710
Finance and administration	8	8
Development	8	7
Manufacturing	19	10
Research	16	14
	51	. 39
	2003	2002
Their aggregate remuneration (including directors) comprised:	£	£

Their aggregate remuneration (including directors) comprised:		
Wages and salaries	2,288,245	1,692,985
Social security costs	266,275	179,049
Other pension contributions	216,290	133,437
Government grants	2,770,810	2,005,471

The wages and salaries analysis above excludes the effects of the share-based compensation credit during the year of £593,691 (2002 - £1,156,050).

## 7 Tax on loss on ordinary activities

Tax credit comprises:

	2003 £	2002 £
Current tax:		
UK corporation tax - research and development tax credit	(650,000)	(644,618)
Finnish tax credit	(949)	_
Adjustments in respect of prior years:	-	
- Research and development tax credit		
9 months ended 31 December 2001	-	(388,326)
- Research and development tax credit		
year ended 31 March 2001	•	(365,874)
Tax loss on ordinary activities	(650,949)	(1,398,818)
Loss on ordinary activities before tax  Tax on loss on ordinary activities at standard rate	(2,625,478)	(7,121,574) (2,136,472)
Factors affecting credit for the year:		
Expenses not deductible for tax purposes	5,390	269,542
Share based compensation	(178,107)	(346,000)
Capital allowances in deficit of depreciation	5,553	7,735
Losses not recognised	1,767,219	1,135,910
Movements in short term timing differences	14,621	(38,094)
Goodwill amortisation	376,153	376,153
Differences in rate for research and development relief	(16,246)	83,172
Differences in respect of prior years	-	(750,764)
Other movements	(54)	
Current tax credit for year	(650,949)	(1,398,818)

The company has tax losses available to carry forward against future taxable profits, subject to agreement with the Inland Revenue.

No deferred tax asset has been recognised in respect of timing differences relating primarily to tax losses as there is insufficient evidence that the asset would be recoverable. The amount of asset not recognised is £5,893,193 (2002 - £4,219,236). The asset is expected to be recoverable when the company generates sufficient profits.

#### 8 Profit attributable to Ark Therapeutics Group plc

The profit for the financial year dealt with in the financial statements of Ark Therapeutics Group plc, was £1,232 (2002 - £1,056). As permitted by Section 230 of the Companies Act 1985, no separate profit and loss account is presented in respect of the parent company.

#### 9 Loss per share

FRS 14 requires presentation of diluted earnings per share when a company could be called upon to issue shares that would decrease net profit or increase net loss per share. For a loss making company with outstanding share options, net loss per share would only be increased by the exercise of out-of-the-money options. Since it seems inappropriate to assume that option holders would exercise out-of-the-money options, no adjustment has been made to diluted loss per share for out-of-the-money share options.

The loss per share is based on the weighted average number of shares adjusted to reflect the restructuring of share capital on listing of the company (see note 28) and is presented as if the share restructuring had happened at the beginning of the period under review.

The calculation of basic and diluted loss per ordinary share is based on a loss of £8,100,643 (2002 - £5,722,756) and on 81,106,688 (2002 - 81,106,688) ordinary shares, being the weighted average number of ordinary shares in issue during the year.

## 10 Intangible fixed assets

Group	Goodwill £
Cost	
At 1 January 2003 and 31 December 2003	5,015,380
Amortisation	
At 1 January 2003	2,455,445
Charge for the year	1,253,844
At 31 December 2003	3,709,289
Net book value	
At 31 December 2003	1,306,091
At 31 December 2002	2,559,935

The company had no intangible fixed assets (2002 - nil).

## 11 Tangible fixed assets

Group					
	Leasehold improvements £	Laboratory equipment £	Office equipment £	Total £	
Cost		٧.			
At 1 January 2003	254,116	494,609	140,234	888,959	
Additions	82,515	89,827	84,319	256,661	
Disposals	-	_	(5,629)	(5,629)	
Exchange adjustment	21,161	35,786	3,395	60,342	
At 31 December 2003	357,792	620,222	222,319	1,200,333	
Depreciation					
At 1 January 2003	_	139,445	67,474	206,919	
Charge for the year	40,243	75,642	40,065	155,950	
Disposals	-		(5,629)	(5,629)	
Exchange adjustment	238	6,814	1,203	8,255	
At 31 December 2003	40,481	221,901	103,113	365,495	
,					
Net book value					
At 31 December 2003	317,311	398,321	119,206	834,838	
At 31 December 2002	254,116	355,164	72,760	682,040	

The net book value of assets held under finance leases at 31 December 2003 was £nil (2002 - £11,338). The company owned no fixed assets during the year.

## 12 Investments held as fixed assets

#### Group

	Group			Company	
	2003	2002	2003	2002	
	£	£ £	£	£	
Subsidiary undertakings	-	_	8,229	7,751	
Other investments and loans	<u> </u>	235	-		
	<del>_</del> _	235	8,229	7,751	

#### Principal group investments

The parent company and the group have investments in the following subsidiary undertakings which principally affected the profits or net assets of the group.

•	Country of		
	incorporation	Holding	%
Ark Therapeutics Limited	England	Ordinary	100
Ark Therapeutics Oy	Finland	Ordinary	100
KerraTec Inc.	USA	Ordinary	100

The principal activity of each of the companies above is the discovery, development and commercialisation of products in areas of specialist medicine.

The investment in Ark Therapeutics Oy is held by Ark Therapeutics Limited.

#### Subsidiary undertaking

Cost and net book value		
At 1 January 2003	7,7	51
Additions	4	78_
At 31 December 2003	8,22	29

#### Acquisition of subsidiary undertaking

As disclosed in note 1, the company acquired 100% of the issued share capital of Ark Therapeutics Limited on 24 April 2002 in exchange for the issue of ordinary shares of 0.02p each in the company on a one-for-one basis. In accordance with Sections 131 and 133 of the Companies Act 1985, the company has taken no account of any premium on the shares issued and has recorded the cost of the investment at the nominal value of the shares issued.

On 23 December 2003, KerraTec Inc. was incorporated in Delaware, USA and 85,000 ordinary shares of \$0.01 each in that company were acquired by the company.

## 13 Stocks

As at 31 December 2003, the group held stocks of finished goods of £9,200 (2002 - £nil). No stocks were held by the company.

## 14 Debtors

	Group			Company	
	2003 £	2003	2002	2003	2002
		£	£	£	
Amounts falling due within one year:					
VAT	113,648	246,046	-	. –	
Other debtors	51,429	50,000	50,000	50,000	
Prepayments and accrued income	202,459	119,270	-		
Research and development tax credits receivable	650,000	1,032,864	<u> </u>	***	
	1,017,536	1,448,180	50,000	50,000	
Amounts falling due after one year:					
Other debtors		10,300	· <u>-</u>	_	
	1,017,536	1,458,480	50,000	50,000	

## 15 Creditors: amounts falling due within one year

	Group			Company
	2003	2002	2003	2002
	£	£	€	£
Obligations under finance leases	· <b>-</b>	5,867	_	-
Other loans	47,478	10,886	· <b>-</b>	-
Trade creditors	171,096	434,271	_	-
Amounts owing to subsidiary undertakings	, <del>-</del>	_	24,478	10,000
Other taxes and social security	56,962	63,027	-	-
Other creditors	12,224	21,180	-	_
Accruals and deferred income	2,295,004	1,709,757	<u> </u>	
	2,582,764	2,244,988	24,478	10,000

## 16 Creditors: amounts falling due after more than one year

		Gro		
		2003	2002	
	 	 £	£	
Other loans		486,808	382,073	
Borrowings are repayable as follows:				
Finance leases:				
Within one year			5,867	
Other loans:				
In more than one year but not more than two years		87,996	96,093	
In more than two years but not more than five years		297,705	191,281	
In more than five years		101,107	94,699	
		486,808	382,073	
In one year or less, or on demand	*	47,478	10,886	
	 	534,286	392,959	

The company had no creditors falling due after more than one year (2002 - £nil).

#### Notes to the accounts

year ended 31 December 2003

## 17 Derivatives and other financial instruments (continued)

As at 31 December 2003 the group also held open a foreign currency forward contract that the group had taken out to hedge certain expected future foreign currency costs. At 31 December 2003 the group had a firm commitment to purchase \$1,000,000 at a fixed rate of \$1.607 to one pound (2002 - £nil).

#### Maturity of financial liabilities

The maturity profile of the group's financial liabilities at 31 December 2003 was as follows:

	Non-equity shares £	Borrowings £	Total 2003 £	Total 2002 £
In one year or less	50,000	47,478	97,478	66,753
In more than one year but not more than two years	-	87,996	87,996	96,093
In more than two years but not more than five years	-	297,687	297,687	191,281
In more than five years	_	101,107	101,107	94,699
	50,000	534,268	584,268	448,826

The group had undrawn committed borrowing facilities as at 31 December 2003 as disclosed in note 16.

#### Fair values

The Directors consider there to be no material difference between the book value of financial instruments and their fair value at the balance sheet dates.

#### Gains and losses on hedges

The group enters into forward foreign currency contracts to eliminate the currency exposures that arise on purchases denominated in foreign currencies. Changes in the fair value of instruments used as hedges are not recognised in the financial statements until the hedged position matures. The Directors do not consider that the amount of unrecognised gains and losses is material as at 31 December 2003.

#### 18 Called up share capital

	2003	2002
	ε	£
Authorised		
4,975,210,397 ordinary shares of 0.02p each	995,042	995,042
15,032,846 A ordinary shares of 0.02p each	3,007	3,007
9,756,757 B ordinary shares of 0.02p each	1,951	1,951
50,000 preference shares of £1 each	50,000	50,000
	1,050,000	1,050,000
Called up, allotted and fully paid		
13,968,498 ordinary shares of 0.02p each	2,793	2,793
15,032,846 A ordinary shares of 0.02p each	3,007	3,007
9,756,757 B ordinary shares of 0.02p each	1,951	1,951
50,000 preference shares of £1 each	50,000	50,000
	57,751	57,751

### 18 Called up share capital (continued)

The terms of the A and B ordinary shares have a number of rights and restrictions attached to them as set out below:

#### Pre-emption

All shares proposed to be issued must first be offered to shareholders pro rata to their existing holdings of shares. For this purpose, each A or B ordinary share held is treated as if it had been converted into an ordinary share. If a holder of A or B ordinary shares wishes to transfer the shares to a third party, the transferor must first offer the shares to existing shareholders of the same class and then to other existing shareholders.

#### Conversion

Upon a listing or sale of the company all of the A or B ordinary shares convert into ordinary shares. The number of ordinary shares issued for each A or B ordinary share redeemed will be based on the A or B conversion rate immediately prior to the listing.

#### Income priority

Subject to the rights of the non-voting redeemable preference shares as set out below, any profits determined by the company to be distributed will be applied thereafter in paying a dividend to the holders of A and B ordinary shares. This convertible distribution amount will be distributed amongst the holders of A ordinary shares and B ordinary shares (pari passu as if the same constituted one class of share) according to the number of ordinary shares deemed to be held by the shareholders.

#### Capital priority

Subject to the rights of the non-voting redeemable preference shares as set out below, holders of A ordinary shares and B ordinary shares rank ahead of the holders of ordinary shares upon any winding-up or other return of capital of the company. The A ordinary shares and B ordinary shares rank equally in this regard.

#### Change of control

If a group of shareholders between them representing a controlling interest in the issued equity share capital of the company accept an offer to sell their shares to a third party, the remaining shareholders will be bound to also accept the offer.

On 24 April 2002, the company acquired 100% of the share capital of Ark Therapeutics Limited in a share for share exchange with the shareholders of Ark Therapeutics Limited.

At an extraordinary general meeting on 17 April 2002, shareholders voted to create 50,000 non-voting redeemable preference shares of £1 each. On 25 April 2002, 50,000 redeemable preference shares were allotted to Mr M D Williams following receipt of an irrevocable and unconditional undertaking by M D Williams to pay £1 in cash in subscription for each of the shares. The terms of the redeemable preference shares have a number of rights and restrictions as set out below:

#### a) Income

Holders of preference shares will not have the right to participate in any profits of the company available for distribution at any time prior to December 2005. Thereafter, holders of preference shares will have the right to receive a fixed cumulative preferential dividend at the rate of 0.1 per cent per annum on the paid-up issued shares, such shares ranking for dividend in priority to all other shares in issue.

## 20 Reconciliation of movements in consolidated shareholders' funds

	2003	2002
	£	€
Loss for the financial year	(8,100,643)	(5,722,756)
Share-based compensation	(593,691)	(1,156,050)
Other recognised gains and losses relating to the year	(12,741)	(6,277)
New shares issued		50,000
Net reduction in shareholders' funds	(8,707,075)	(6,835,083)
Opening shareholders' funds	17,962,733	24,797,816
Closing shareholders' funds	9,255,658	17,962,733

## 21 Net cash outflow from operating activities

	2003	2002
	£	£
Operating loss	(9,209,232)	(7,886,254)
Depreciation charge	155,950	85,690
Amortisation of goodwill	1,253,844	1,253,842
Decrease (increase) in debtors	68,622	(192,338)
Increase in stocks	(9,200)	_
Increase in creditors	219,456	461,432
Share based compensation	(593,691)	(1,156,050)
Net cash outflow from operating activities	(8,114,251)	(7,433,678)

## 22 Analysis of cash flows for headings netted in the cash flow statement

	2003	2002
	£	£
Returns on investments and servicing of finance		
Interest received	457,640	764,680
Taxation		
Research and development tax credit	1,033,813	365,954
Capital expenditure and financial investment		
Payments to acquire tangible fixed assets	(256,661)	(582,189)
Financing		
Capital element of finance lease rental repayments	(5,867)	(5,867)
Repayment of loans	(33,638)	_
New loans	209,421	260,031
Net cash inflow from financing	169,916	254,164

## 23 Analysis of changes in net funds

	At 1 January 2003 £	Cash flows	Foreign exchange £	At 31 December 2003 £
Cash at bank and in hand	15,889,104	(6,709,543)	(21,996)	9,157,565
Finance leases	(5,867)	5,867	_	_
Loans - due within one year	(10,886)	(38,227)	1,635	(47,478)
Loans - due outside of one year	(382,073)	(137,556)	32,821	(486,808)
Net funds	15,490,278	(6,879,459)	12,460	8,623,279

#### 24 Reconciliation of net cash flow to movement in net funds

2003
£
(6,709,543)
5,867
(175,783)
(6,879,459)
12,460
(6,866,999)
15,490,278
8,623,279

## 25 Pension arrangements

The group makes contributions to employees' personal pension plans for which the pension cost charge for the year amounted to £207,793 (2002 - £133,437).

#### 26 Financial commitments

### Operating lease commitments

At 31 December 2003 the group was committed to making the following payments during the next year in respect of operating leases:

		Land and	Land and			
	buildings			Other		
.*		2003	2003	2002	2003	2002
	£	£	£	<u>£</u>		
	19,594	88,197	1,297	3,192		
Within two to five years	214,154	89,689	10,952	· _		
	233,748	177,886	12,249	3,192		
		19,594 214,154	buildings 2003 2002 ε ε  19,594 88,197 214,154 89,689	2003   2002   2003   E   E   E   E   E   E   E   E   E		

#### 27 Related party transactions

The following transactions took place during the year at arm's length:

Professor J F Martin and Professor S Ylä-Herttuala, both shareholders and Directors of the company and group companies during the year, charged consultancy fees of £36,000 (2002 - £34,200) and £48,500 (2002 - £48,500) respectively. These fees were not in respect of their services as Directors, but were included within Directors' remuneration. At 31 December 2003, £48,484 (2002 - £38,636) was owed to Professor S Ylä-Herttuala, and £3,000 (2002 - £3,125) was owed to Professor J F Martin.

Merlin Ventures Limited, the 100% owner of Merlin Equity Limited, a shareholder of the company, recharged expenses incurred on behalf of the company of £528 (2002 - £99) at cost and Director's fees for the services of P S Keen of £12,500 (2002 £12,500). At 31 December 2003, £6,252 (2002 - £3,126) was owed to Merlin Ventures Limited. P S Keen is also a Director of Merlin Ventures Limited.

Nomura International plc, a shareholder of the company, recharged expenses incurred on behalf of the company of £nil (2002 - £15,371) and Directors' fees in respect of Dr G N Vernon and Dr W Plischke of £9,378. At 31 December 2003, £2,084 was owed to Nomura International plc.

University College London has a controlling interest in UCL Cruciform, a shareholder of the company. £177,220 (2002 - £189,868) was charged by University College London for services provided under collaboration agreements with the company. Additionally, £45,858 (2002 - £100,858) was paid to the University as grants. At the year end, £113,821 was outstanding (2002 - £243,917).

#### 28 Post balance sheet events

On 16 January 2004, by a special resolution passed by the shareholder of the company, the share capital of the company was increased to £58,086 by the creation of 175,000 ordinary shares of 0.02p each, 1,250,000 non-convertible C ordinary shares of 0.02 pence each and 250,000 non-convertible D ordinary shares of 0.02 pence each, each having the rights and being subject to the restrictions and obligations set out in the articles of association.

The non-convertible C ordinary shares and the non-convertible D ordinary shares, were issued to a Family Benefit Trust in respect of Nigel Parker and Martyn Williams respectively and will, conditional upon and simultaneously with Admission, be redeemed by the company and in their place a number of new ordinary shares will be issued to the Family Benefit Trust.

Under a special resolution passed during February 2004, simultaneously upon Listing, each A ordinary share in issue at that time will be converted into one ordinary share of 0.02 pence each and each B ordinary share will be converted into ordinary shares of 0.02 pence each (on the basis of 1.184 ordinary shares for every B ordinary share, and for which purposes the Directors may capitalise such sum as may be necessary by paying up in full unissued ordinary shares of 0.02 pence each). Immediately following this conversion, there will be a bonus issue of 99 ordinary shares of 0.02 pence each for each ordinary share of 0.02 pence each. Thereafter, there will be a consolidation on the basis of one ordinary share of 1 pence each for every 50 ordinary shares of 0.02 pence each then in issue.

The preference shares will be redeemed conditional on or simultaneous with the Admission of the company's ordinary share capital to the Official List of the UK Listing Authority.

Professor John Martin and Dr Kalevi Kurkijarvi resigned from the board of Directors on the date of Listing

#### Notice of Annual General Meeting

Notice is hereby given that the annual general meeting of Ark Therapeutics Group plc will be held at the offices of Ashurst, Broadwalk House, 5 Appoid Street, London EC2A 2HA on Monday 5 July 2004 at 12.15 p.m., for the following purposes:

#### **Ordinary Business**

- 1. To receive the accounts for the financial year ended 31 December 2003, together with the reports of the Directors and auditors thereon. (Resolution 1)
- 2. In accordance with article 106 of the Company's articles of association, to re-elect Dennis Turner who is submitting himself for reappointment as a Director. (Resolution 2)
- 3. In accordance with article 106 of the Company's articles of association, to re-elect Dr Nigel Parker who is submitting himself for reappointment as a Director. (Resolution 3)
- 4. In accordance with article 110 of the Company's articles of association, to re-elect David Prince who is submitting himself for reappointment as a Director. (Resolution 4)
- 5. In accordance with article 110 of the Company's articles of association, to re-elect Dr Wolfgang Plischke who is submitting himself for reappointment as a Director. (Resolution 5)
- 6. To reappoint Sir Mark Richmond, aged 73, as a Director. (Resolution 6)
- 7. To reappoint Deloitte & Touche LLP as auditors of the Company and to authorise the Directors to set their remuneration. (Resolution 7)

### Special Business

To consider and, if thought fit, to pass the following resolutions of which resolution 8 will be proposed as an ordinary resolution and resolution 9 will be proposed as a special resolution:

8. That the Directors be and are hereby generally and unconditionally authorised for the purposes of section 80 of the Act, to exercise all the powers of the Company to allot relevant securities (within the meaning of section 80(2) of the Act) up to an aggregate nominal amount of £378,993 (being 30 per cent. of issued share capital as at the date of this Notice), this authority to expire at the conclusion of the annual general meeting of the Company in 2005 or on 5 October 2005, whichever is the earlier (save that the Company

- may before such expiry make any offer or agreement which would or might require relevant securities to be allotted after such expiry and the Directors may allot relevant securities in pursuance of any such offer or agreement as if the authority conferred hereby had not expired). This authority is in substitution for any and all authorities previously conferred on the Directors for the purposes of section 80 of the Act. (Resolution 8)
- 9. That the Directors be and are hereby empowered pursuant to section 95(1) of the Act, subject to the passing of resolution 8 above, to allot equity securities (as defined in section 94 of the Act ) for cash pursuant to the authority conferred by resolution 8 above as if section 89(1) of the Act did not apply to any such allotment provided that such power shall be limited to the allotment of equity securities:
- (a) in connection with a rights issue or other pre-emptive offer in favour of ordinary shareholders where the equity securities are proportionate (as nearly as practicable) to the respective number of ordinary shares held by such holders but subject to such exclusions or other arrangements as the Directors may deem necessary or desirable in relation to fractional entitlements or legal or practical problems arising in, or pursuant to, the laws of any territory or the requirements of any regulatory body or stock exchange in any territory; and
- (b) otherwise than pursuant to paragraph (a) of this resolution, up to an aggregate nominal amount of £63,135,

and this power shall expire at the conclusion of the annual general meeting of the Company to be held in 2005 or on 5 October 2005, whichever is the earlier (save that the Company may, at any time before the expiry of such power, make any offer or enter into any agreement which would or might require equity securities to be allotted after the expiry of such power and the Directors may allot equity securities in pursuance of any such offer or agreement as if such power conferred hereby had not expired). This authority is in substitution for any and all authorities previously conferred upon the Directors for the purposes of section 95 of the Act. (Resolution 9)

#### By order of the board

Nick Plummer, Company Secretary

4 June 2004

Registered Office: 1 Fitzroy Mews London W1T 6DE

#### Proxies

1. A member entitled to attend and vote may appoint a proxy or proxies who need not be a member of the Company to attend (and on a poll to vote) instead of him or her. Forms of proxy need to be deposited with the Company's registrar, Capita Registrars, PO Box 25, 34 Beckenham Road, Beckenham,

Kent BR3 4TU not later than 48 hours before the time of the meeting. Completion of a form of proxy will not preclude a member attending and voting in person at the meeting.

#### Documents on display

2. The register of Directors' interests in the share capital and debentures of the Company, together with copies of service agreements under which Directors of the Company are employed, and copies of the terms and conditions of appointment of nonexecutive Directors are available for inspection at the Company's registered office during normal business hours from the date of this notice until the date of the annual general meeting and will be available for inspection at the place of the annual general meeting for at least 15 minutes prior to and during the meeting.

#### Right to attend and vote

3. Pursuant to regulation 41 of the Uncertificated Securities Regulations 2001, the Company specifies that in order to have the right to attend and vote at the meeting (and also for the purpose of calculating how many votes a person entitled to attend and vote may cast), a person must be entered on the register of the Company by no later than 11.30 a.m. on 3 July 2004, being 48 hours before the time fixed for the meeting. Changes to entries on the register after this time shall be disregarded in determining the rights of any person to attend or vote at the meeting.

#### **Explanatory notes**

4. Resolutions 2 and 3. One-third of the board is required to retire by rotation each year. Dennis Turner and Dr Nigel Parker are the two Directors who resign this year and who are consequently proposed for re-election.

Dennis Turner, aged 61, joined Ark as non-executive Chairman in 1999. Most of his career has been spent creating, financing and developing companies in the medical and pharmaceutical sectors. He was chairman and chief executive officer of Pharmaceutical Marketing Services Inc. and Walsh International Inc. (both NASDAQlisted). Mr Turner is a member of the Remuneration and Nomination. Committees. As with all non-executive Directors of the Company, his appointment is reviewed annually and is subject to three months' notice of termination

Dr Nigel Parker, aged 50, has been Chief Executive Officer of Ark since 1997 and is responsible for the strategy and commercial focus of the Group. He has over 20 years' experience in the international pharmaceutical business, with senior roles in companies such as Teva Pharmaceuticals Limited and Pharmaceutical Marketing Services Inc.. He has a service contract with the Company with a 12 month notice period.

5. Resolutions 4 and 5. These resolutions are to re-appoint David Prince and and Dr Wolfgang Plischke as Directors whose appointments by the board need to be confirmed by shareholders in accordance with the Company's articles of association. David Prince, aged 52, is a non-executive Director and Chairman of

the Audit Committee. He was appointed to the board on 26 May 2004. Mr Prince, who has over 10 years' experience of operating at company board level, was until recently Group Finance Director of Cable and Wireless.

Dr Wolfgang Plischke, aged 52, is a non-executive Director and a member of the Audit Committee, having been appointed by the board in December 2003. Dr Plischke is a member of the Bayer Healthcare Executive Committee and President of the Global Pharmaceuticals Division of Bayer.

6. Resolution 6. PIRC (Pensions Investments Research Consultants) recommend that directors over the age of 70 should be subject to re-election each year. Sir Mark Richmond, aged 73, is therefore standing for re-election this year. Sir Mark is a non-executive Director, senior Independent Director, Chair of the Nomination Committee and the Remuneration Committee and a member of the Audit Committee. Sir Mark was appointed as a non-executive Director of Ark in 1997. He was formerly Group Head of Research at Glaxo Group pic and holds non-executive board positions at Genentech Inc., Cytos AG, Targeted Genetics, Inc., Paratek Pharmaceuticals Inc. and Sosei

Limited.

- 7. Resolution 8. Your Directors may only allot shares or grant rights over shares if authorised to do so by shareholders. The authority granted on 24 February 2004 is due to expire at the Company's annual general meeting in 2005, or on 8 June 2005, whichever is earlier. It is usual and prudent to renew such authority annually and, whilst the authority currently in place is valid for the coming year. there is a possibility that should the Company's annual general meeting in 2005 take place after 8 June, there will be a short period during which the Directors will have no authority in this regard. Accordingly, resolution 8 will be proposed as an ordinary resolution to grant a new authority to allot unissued share capital up to an aggregate nominal value of £378,993, representing approximately 30 per cent. of the total issued ordinary share capital as at 3 June 2004. If given, this authority will expire at the annual general meeting in 2005 or on 5 October 2005, whichever is the earlier. Other than in respect of the Company's obligations under its share option schemes, the Directors have no present intention of issuing any of the authorised but unissued share capital of the Company.
- 8. Resolution 9. Your Directors also require additional authority from shareholders to allot shares or grant rights over shares where they propose to do so for cash and otherwise than to existing shareholders pro rata to their holdings. The authority granted on 24 February 2004 is due to expire on 8 June 2005. However, this year's annual general meeting is an opportunity to extend further the validity of this authority to ensure that it is in place for the same period as the authority proposed to be granted by resolution 8. Accordingly, resolution 9 will be proposed as a special resolution to grant such authority. The authority will be limited to the issue of shares for cash up to an aggregate nominal value of £63,135 (being five per cent, of the issued ordinary share capital on 8 March 2004). If given, this authority will expire on 5 October 2005 or at the conclusion of the annual general meeting in 2005, whichever is the earlier.

## Ark Therapeutics Group plc

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#### **APPENDIX 15**

#### **Press Releases**

- (a) Press release dated July 5, 2004 regarding result of annual general meeting.
- (b) Press release dated June 17, 2004 regarding receipt of EU orphan designation for Trinam.
- (c) Press release dated June 7, 2004 regarding presentation of full analysis of second efficacy and safety study for Cerepro in malignant glioma.
- (d) Press release dated May 28, 2004 regarding appointment of David Prince as Non Executive Director.
- (e) Press release dated May 18, 2004 regarding agreement to supply EG005 on compassionate use for patients completing Phase II lipodystrophy syndrome trial.
- (f) Press release dated May 11, 2004 regarding commencement of Trinam patient enrolment into Phase II study.
- (g) Press release dated May 6, 2004 regarding Cerepro study receiving clearance from MHRA and GTAC.
- (h) Press release dated May 5, 2004 regarding Second Cerepro efficacy and safety study results in malignant glioma to be presented at American Society of Gene Therapy.
- (i) Press release dated April 19, 2004 regarding change of Company Secretary.
- (j) Press release dated March 17, 2004 regarding winning drug tariff listing for Kerraboot.
- (k) Press release dated March 3, 2004 regarding successful completion of IPO.
- (I) Press release dated February 17, 2004 regarding announcement of intention to float.
- (m) Press release dated December 17, 2003 regarding head of Bayer Pharmaceuticals joining Ark Board as non-executive Director.
- (n) Press release dated December 15, 2003 regarding Kerraboot getting the go ahead for launch in the USA.
- (o) Press release dated November 17, 2003 regarding launch of first UK product Kerraboot.
- (p) Press release dated October 29, 2003 regarding grant of patent in Europe for Kerraboot a novel device for leg and foot ulcers.
- (q) Press release dated October 27, 2003 regarding grant of first patent in the USA for EG009 in brain cancer treatment.
- (r) Press release dated October 15, 2003 regarding appointment of Flexicare as manufacturer of Kerraboot.
- (s) Press release dated August 15, 2003 regarding report ranking Ark's scientists amongst world leaders in cardiovascular gene therapy.

- (t) Press release dated March 21, 2003 regarding optimised peptide EG3306 inhibiting retinal neovascularisation in vivo.
- (u) Press release dated January 22, 2003 regarding announcement that HIV-1-Tat derived peptides inhibit HIV replication.

Ark

**Result of Annual General Meeting** 

London, UK, 5 July 2004: At the Annual General Meeting of Ark Therapeutics Group plc ("Ark")

(LSE: AKT), held today, all resolutions were passed.

Copies of the approved resolutions will be submitted to the UK Listing Authority and will shortly be

available for inspection at the UK Listing Authorities Document Viewing Facility, which is situated

at:

Financial Services Authority

25 The North Colonnade

Canary Wharf

London E14 5HS

Tel: +44 (0) 20 7676 1000

Dennis Turner, Chairman, commented: "We are delighted that, so early in Ark's life as a public

company, management has demonstrated an ability to deliver tangible progress with the first

marketed product and its lead clinical programmes. We look forward to building on these

developments as we execute our plans to enhance the value of your Company."

**Enquiries:** 

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Financial Dynamics
David Yates
Lucy Briggs

#### **Notes to Editors**

#### Ark Therapeutics Group plc

Ark is an emerging healthcare group (the "Group") with one product introduced into hospitals and three further lead products in late stage clinical development. Capitalising on over ten years of research in vascular biology and gene-based medicine, Ark has a balanced portfolio of proprietary healthcare products targeted at specific unmet clinical needs within vascular disease and cancer. These are large and growing markets, where opportunities exist for effective new products to generate significant revenues.

Ark's products are sourced from related but largely non-dependent technologies within the Group and have been selected to enable Ark to take each product through development and to benefit from Orphan Drug Status and/or Fast Track Designation, as appropriate. The Group generally retains ownership of its product candidates throughout clinical development. Ark has secured patents or has patent applications pending for all its lead products in principal pharmaceutical markets and retains the right to market its lead products in the key North American and European markets

Ark has its origins in businesses established in the mid-1990s by Professor John Martin and Dr Stephen Barker of University College London and Professor Seppo Ylä-Herttuala of the Al Virtanen Institute at the University of Kuopio, Finland, all of whom play leading roles in the Company's research and development programmes.

Ark's shares were successfully listed through an initial public offering on the London Stock Exchange in March 2004 (AKT.L).

This announcement includes "forward-looking statements" which include all statements other than statements of historical facts, including, without limitation, those regarding the Group's financial position, business strategy, plans and objectives of management for future operations (including development plans and objectives relating to the Group's products and services), and any statements preceded by, followed by or that include forward-looking terminology such as the words "targets", "believes", "estimates", "expects", "aims", "intends", "will", "can", "may", "anticipates", "would", "should", "could" or similar expressions or the negative thereof. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors beyond the Group's control that could cause the actual results, performance or achievements of the Group to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding the Group's present and future business strategies and the environment in which the Group will operate in the future. Among the important factors that could cause the Group's actual results, performance or achievements to differ materially from those in forward-looking statements include those relating to Ark's funding requirements, regulatory approvals, clinical trials, reliance on third parties, intellectual property, key personnel and other factors. These forwardlooking statements speak only as at the date of this announcement. The Group expressly disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statements contained in this announcement to reflect any change in the Group's expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based. As a result of these factors, prospective investors are cautioned not to rely on any forward-looking statement.





#### Ark's Trinam® receives EU Orphan Designation

London, UK, \_ June 2004: Ark Therapeutics Group plc announces that it has received notification from the European Agency for the Evaluation of Medicinal Products, Committee for Orphan Medicinal Products (COMP) that Trinam®, its novel therapy to prevent blood vessels blocking after vascular graft access surgery, has received Orphan Medicinal Product Designation for Europe. EU Orphan Designation confers a number of regulatory benefits for the product including access to scientific advice, reduced regulatory fees and a 10 year period of marketing exclusivity from the date of approval. Trinam® has already been granted Orphan Designation in the US and qualifies for similar regulatory benefits and a marketing exclusivity period of 7 years.

Trinam® is a combination of a Vascular Endothelial Growth Factor (VEGF) gene in an adenoviral vector and Ark's biodegradable collagen collar local delivery device (EG001). The initial target market for Trinam® is haemodialysis access graft surgery, a treatment for kidney failure patients in which a plastic tube is grafted between blood vessels in the forearm to enable regular blood filtration. At the end of the access graft surgery procedure, the EG001 delivery device is fitted around the outside of the vein where it has been joined to the access graft. The VEGF gene in solution is then injected into the reservoir formed between the delivery device and the blood vessel, from where it passes into the blood vessel wall, transfecting the smooth muscles cells in the wall – a process known as adventitial transfection. This unique method of administration allows Trinam® to be localised to the target tissue site where the therapy is needed.

Trinam® is currently in Phase II clinical trials in the USA. The Phase II ascending dose study in up to 20 patients is designed to examine the efficacy and safety of Trinam® in patients

undergoing haemodialysis access graft surgery. Trinam® was approved for Phase II/III

development by the US Recombinant DNA Advisory Committee in October 2001. Pre-clinical

studies have demonstrated a significant effect in preventing intimal hyperplasia and successful

adventitial gene transfer.

In the US and Europe, there are an estimated 150,000 cases1 a year where Trinam® might be used. In

patients fitted with haemodialysis access grafts, up to 60% of the grafts block within a year of being

inserted, and repeat surgery shows more rapid failure rates. Trinam® is expected to extend the useful life of

access grafts and reduce costly repeat procedures. There are currently no approved drug therapies to reduce

the failure rates of access graft procedures for haemodialysis patients. The clinical need for an effective

treatment is such that the National Institute of Health in the USA has highlighted it as a priority requiring a

solution in the Healthy People Directive 2010.

Dr Alan Boyd, Research and Development Director of Ark, commented: "Using Trinam® to prevent the

blockage of haemodialysis access grafts is a novel concept and the granting of Orphan Designation is an

important validation of our science and focus on specialist areas of medicine where there is clear unmet

medical need. This is good news with both regulatory and commercial benefits and shows Ark is

continuing to make progress in line with its objectives."

For further information, please contact:

Ark Therapeutics Group plc

Dr Nigel Parker, CEO

Dr Alan Boyd, Director of Development

020 7388 7722

**Financial Dynamics** 

David Yates

Lucy Briggs

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<sup>1</sup> Source: Ark Research

#### Notes to Editors

#### **EU Orphan Medicinal Product Designation**

EU Orphan Medicinal Product Designation may be granted to drugs intended to treat a "rare disease or condition", which is if the disease is life threatening or chronically debilitating and affects no more than 50 in 100,000 persons in the EU; where without incentive it is unlikely that the drug would generate sufficient return to justify the necessary investment; and no satisfactory method of treatment for the condition exists or, if it does, the new drug will provide a significant benefit to those affected by the condition. If a product that has an Orphan Medicinal Product Designation subsequently receives the first regulatory approval for the indication for which it has such designation, the product is entitled to orphan exclusivity, meaning that the other applications to market the same drug for the same indication may not be approved, except in certain very limited circumstances, for a period of ten years.

#### FDA Orphan Designation - US

Orphan Designation is granted by the FDA to drugs that are intended to treat a "rare disease or condition", which is defined as one affecting no more than 75 in 100,000 persons or fewer than 200,000 people. Orphan Designation encourages manufacturers to develop drugs intended for rare diseases by qualifying the developer for tax credits and an exclusive period of seven years during which the FDA cannot approve other applications to market the same drug for the same indication, unless superiority can be demonstrated.

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## Ark presents full analysis of second efficacy and safety study for Cerepro<sup>™</sup> in malignant glioma: Cerepro<sup>™</sup> well tolerated and survival time significantly increased

**London, UK, 7 June 2004:** Ark Therapeutics Group plc, the emerging healthcare group, has announced a full analysis of the audited results of the second efficacy and safety study (Study 903) of Cerepro<sup>TM</sup> for the treatment of patients with operable malignant glioma. The results were presented at this year's American Society of Gene Therapy (ASGT) meeting in Minneapolis on 5<sup>th</sup> June.

Study 903 was a 36 patient randomised, standard care<sup>1</sup> controlled study, blinded to the point of treatment allocation and enrolled both primary and recurrent cases of malignant glioma. On the primary survival end point<sup>2</sup>, Cerepro<sup>TM</sup>, administered after surgical removal of the solid tumour mass. demonstrated an 81% increase in mean survival (from 39 weeks to 71 weeks) compared to standard care<sup>1</sup>. The difference in survival was statistically significant at the p=0.0095 level (Kaplan Meier-Log rank regression). The difference in survival time remained statistically significant when study results were adjusted for the main disease prognostic factors of age, gender, tumour type, histology and Karnofski score (Cox's regression analysis). Further analyses showed that differences in median survival, twelve-month survival and overall survival in all patients, taking all causes of mortality, were also statistically significant between treated and control groups. On secondary endpoints; magnetic resonance imaging (MRI) showed tumour progression to be slowed; the adverse event profile showed Cerepro<sup>™</sup> to be well tolerated overall and there was no evidence of deterioration in the patient's quality of life, or an increased dependency on drug maintenance during the seven-months of extended life. The safety of Cerepro<sup>TM</sup>'s adenoviral vector was reaffirmed in Study 903. Adenoviral antibody titres were initially raised in six patients and adenoviral DNA was found on day two but not thereafter in two patients. These transient increases were not associated with any adverse outcomes. The study was performed in Finland.

Cerepro<sup>TM</sup> has now completed three clinical trials to date. The first, published in Human Gene Therapy in 1998, established the dose and method of administration. Results of the second, an open label efficacy and safety study, were published in Human Gene Therapy in 2000 and showed that Cerepro<sup>TM</sup> doubled mean survival and was well tolerated.

Cerepro<sup>TM</sup>, which has Orphan Drug Status in both the US and Europe, is being developed for the treatment of patients with operable high-grade glioma, a fatal form of brain tumour. The current standard therapy involves surgically removing the solid tumour mass (when possible) and undertaking

<sup>2</sup> death or re-operation to prevent death

surgical removal of solid tumour mass with radiotherapy or chemotherapy



radiotherapy and/or chemotherapy. Even with the latest approved treatments, most patients die within one year of diagnosis, with average survival being about eight months. A high unmet clinical need exists for new treatments that prolong life in this devastating disease. Cerepro<sup>™</sup> is suitable for patients with operable gliomas of which there are approximately 38,000³ cases each year in Europe and the USA.

Dr Nigel Parker, CEO of Ark, commented, "We are very pleased to see the full results from ASGT. They confirm those of the earlier study and support our decision to progress Cerepro<sup>TM</sup>'s development to market. The study also demonstrates and confirms that first generation vectors can deliver significant therapeutic effects."

Dr Alan Boyd Research and Development Director of Ark commented, "These results are encouraging and reinforce our belief that Cerepro<sup>TM</sup> is a very exciting product. The consistent magnitude of effect and safety profile give the product a very good risk-benefit ratio. Cerepro<sup>TM</sup> offers a significant therapeutic advance in this area of clear unmet clinical need."

#### For further information, please contact:

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D a v i d Lucy Briggs Yates

#### Notes to Editors

#### Cerepro<sup>™</sup>

Cerepro<sup>TM</sup> is an adenoviral mediated gene-based medicine (ad.HSV-*tk*) given by multiple injections into the healthy brain tissue of patients, following surgical removal of the solid tumour mass. Cerepro<sup>TM</sup> induces the healthy brain cells surrounding the tumour site to express the enzyme thymidine kinase. Five days after surgery, ganciclovir is given intravenously. The thymidine kinase and ganciclovir react together to produce a substance that specifically kills dividing cells. The healthy neurones surrounding the tumour in the brain are non-dividing and are therefore not susceptible to this substance. In this way Cerepro<sup>TM</sup> harnesses healthy brain cells to help prevent a new tumour from growing.

Registered Office:

<sup>3</sup> source: Company research



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#### ARK THERAPEUTICS GROUP PLC

#### APPOINTMENT OF DAVID PRINCE AS NON EXECUTIVE DIRECTOR

28 May 2004, London UK: Ark Therapeutics Group plc ("Ark" or the "Company"), the emerging healthcare group, today announces the appointment of David Prince as a Non-Executive Director and Chairman of the Audit Committee.

Mr Prince, who has over 10 years experience of operating at public company board level, was until his recent retirement Group Finance Director of Cable and Wireless.

Prior to his appointment as Group Finance Director of Cable and Wireless in July 2002, David spent 10 years working in the Hong Kong telecommunications market where he held a variety of senior board positions. From 1994 to 2000 he was Finance Director and latterly Deputy CEO of Hong Kong Telecom and played a key role in developing this business leading to the sale of the company to PCCW in 2000. He went on to join PCCW as Group CFO primarily focused on the integration of the companies following the acquisition, also completing a US \$12bn refinancing of the Group. David's early career included four years at Cable and Wireless in both General Management and Group marketing roles.

Commenting on his appointment, Dennis Turner, the Chairman of Ark, said: "I am delighted to welcome David to the Ark Board. He has an established and well-respected reputation within the financial community and brings a wealth of relevant experience in the running of technology-driven public companies. He will be a great asset to Ark in our development as a listed company and the building of our portfolio internationally."

#### **ENDS**

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**Financial Dynamics** 

Lucy Briggs / Ben Atwell

#### **Notes to Editors**

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Ark's shares were listed through an initial public offering on the London Stock Exchange in March 2004 (AKT.L).



## Ark agrees to supply EG005 on compassionate use for patients completing Phase II lipodystrophy syndrome trial

London, UK, 18 May 2004: Ark Therapeutics Group plc, the emerging healthcare group, today announces that it has agreed to supply EG005 on compassionate use grounds to allow patients completing the open label stage of its Phase II programme in lipodystrophy to continue their treatment. Ark is currently undertaking a 50 patient blinded Phase II study in HIV patients suffering from lipodystrophy and after completing the 12 week study, patients can elect to go on a 1 year open label extension protocol. The majority of patients completing the initial Phase II study to date elected to enter the extension study. Ark's decision to make the product available on a compassionate use basis is in response to requests from the first patients completing the 1year extension study.

Lipodystrophy occurs predominately amongst HIV-positive patients receiving highly active antiretroviral therapy ('HAART') and is characterised by the loss of body fat on the face and limbs and its redistribution to the abdomen and back (buffalo hump). It is also characterised by adverse changes in serum lipid chemistry and metabolites and notably an increase in lactic acid, which in extreme cases can lead to death. The disorder is very distressing for patients and has been linked in a number of scientific papers to mitochondrial dysfunction. In the USA and Europe it is estimated there are approximately 1 million<sup>1</sup> patients receiving 'HAART' per annum, all of whom suffer from or are at risk of suffering from lipodystrophy.

EG005 is an oral therapy being developed for the treatment of lipodystrophy syndrome and preclinical work at Ark has shown that it increases the ability of mitochondria to produce energy. It is postulated that it may work in lipodystrophy by reversing or partially reversing the reported mitochondrial dysfunction. Ark is also developing the active ingredient of EG005 under the product name Vitor™ for the treatment of muscle wasting (cachexia) in cancer where it is currently in phase III clinical trials.

Dr. Alan Boyd, Research and Development Director at Ark, commented: "This is the first time EG005 has been tested in lipodystrophy in humans and the study is progressing well. It is clearly important not to read too much into any requests for continued availability of EG005 until the study is completed, the data analysed and the results available. However, it is encouraging to see patients electing to go into the open label extension protocol and where supplies are requested beyond the year, we have taken the decision to make EG005 available on compassionate use grounds so patients can continue therapy if an investigator feels it appropriate."

<sup>&</sup>lt;sup>1</sup> Source: Ark Research



#### For further information, please contact:

Ark Therapeutics Group plc
Dr Nigel Parker, CEO
Dr Alan Boyd, Director of Development

020 7388 7722

Financial Dynamics
David Yates
Lucy Briggs

020 7831 3113

#### **Notes to Editors**

#### FG005

EG005 is an oral small molecule therapy being developed for the treatment of lipodystrophy, a secondary, occasionally fatal, condition commonly seen in HIV-positive patients receiving 'HAART'. The active ingredient was originally developed as a treatment for high blood pressure and is currently marketed in Japan and certain countries in Europe.

Lipodystrophy syndrome is a distressing condition characterised by the loss of body fat on the face and limbs and its redistribution to the abdomen and back. There are also additional serious metabolic abnormalities that occur with the fat redistribution, notably changes in lipid, insulin and glucose metabolism associated with an increase in acid levels in the blood (lacticacidosis). This complication reaches serious levels and unpredictably causes death in a small number of patients.

The majority of HIV-positive patients in the US and Europe are prescribed HAART. At the end of 2002 there were an estimated 940,000 patients who were HIV positive in North America and 540,000 in Europe, one quarter of which were unaware of their infection. 90 per cent of those receiving treatment for HIV/AIDS were receiving HAART and, whilst it is difficult to quantify, the Company believes that up to 80 per cent of these display symptoms of lipodystrophy, giving a target market of up to 800,000 patients. (Source: Ark research)

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#### Ark's Trinam® commences patient enrolment into Phase II study

**London, UK, 11 May 2004:** Ark Therapeutics Group plc, the emerging healthcare group, today announces that the first patient in its Phase II study for Trinam<sup>®</sup> (EG004), its novel therapy to prevent blood vessels blocking (intimal hyperplasia) after vascular graft access surgery, has received treatment with the active product. The study is taking place at Duke University Medical Centre in North Carolina, USA.

Trinam<sup>®</sup> is a combination of a Vascular Endothelial Growth Factor (VEGF) gene in an adenoviral vector and Ark's biodegradable collagen collar local delivery device (EG001). The initial target market for Trinam<sup>®</sup>, which was granted Orphan Drug Status in the USA in December 2000, is haemodialysis graft access surgery, a treatment for kidney failure patients in which a plastic tube is grafted between blood vessels in the forearm to enable regular blood filtration. At the end of the access graft surgery procedure, the EG001 collagen collar is fitted around the outside of the vein where it has been joined to the access graft. The VEGF gene solution is then injected between the wall of the collagen collar and the blood vessel. This unique administration of the gene localises its delivery to the target tissue site.

The Phase II study is an ascending dose study, in up to 20 patients, designed to examine the effects and safety of Trinam<sup>®</sup> in intimal hyperplasia prevention, and is expected to complete within the next 12 months. It has been approved by the US Recombinant DNA Advisory Committee and the FDA. The Pre-clinical and Phase I studies have respectively demonstrated a significant effect in preventing intimal hyperplasia, and successful adventitial (from outside the blood vessel) gene transfer.

Dr Jeff Lawson, Principal Investigator, Duke University Medical Centre, commented: "Patients requiring haemodialysis due to kidney failure already contend with constant medical intervention and frequent hospital visits. If this drug can help prolong the life expectancy of their grafts it would improve significantly the quality of life for these patients."

In the US and Europe, there are an estimated 150,000 cases<sup>1</sup> a year where Trinam<sup>®</sup> might be used. In patients fitted with haemodialysis access grafts, up to 60% of the grafts block within a year of being inserted, and repeat surgery shows more rapid failure rates. Trinam<sup>®</sup> is expected to extend the useful life of access grafts and reduce costly repeat procedures. There are currently no approved drug therapies to reduce the failure rates of access graft procedures for haemodialysis patients. The clinical need for an effective treatment is such that the National Institutes of Health in the USA has highlighted it as a priority requiring a solution in the Healthy People Directive 2010.

<sup>1</sup> Source: Ark Research



Dr Alan Boyd research and Development Director of Ark, commented: "Trinam<sup>®</sup> is a novel gene based therapy which addresses one of the major clinical problems end stage renal disease patients can face during their treatment. It has been developed by our pioneering research groups in London and Finland, through their understanding of vascular endothelial growth factor (VEGF) science and vector delivery technology. The results we have had to date are very encouraging and we are delighted to be working with Duke University and seeing this study progressing."

#### For further information, please contact:

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Dr Alan Boyd, Director of Development

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#### **Notes to Editors**

#### Ark Therapeutics Group plc

Ark is an emerging healthcare group (the "Group") with one product introduced into hospitals and three further lead products in late stage clinical development. Capitalising on over ten years of research in vascular biology and gene-based medicine, Ark has a balanced portfolio of proprietary healthcare products targeted at specific unmet clinical needs within vascular disease and cancer. These are large and growing markets, where opportunities exist for effective new products to generate significant revenues.

Ark's products are sourced from related but largely non-dependent technologies within the Group and have been selected to enable Ark to take each product through development and to benefit from Orphan Drug Status and/or Fast Track Designation, as appropriate. The Group generally retains ownership of its product candidates throughout clinical development. Ark has secured patents or has patent applications pending for all its lead products in principal pharmaceutical markets—and retains the right to market its lead products in the key North American and European markets.

Ark has its origins in businesses established in the mid-1990s by Professor John Martin and Dr Stephen Barker of University College London and Professor Seppo Ylä-Herttuala of the Al Virtanen Institute at the University of Kuopio, Finland, all of whom play leading roles in the Company's research and development programmes.

Ark's shares were successfully listed through an initial public offering on the London Stock Exchange in March 2004 (AKT.L).

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#### Ark's Cerepro<sup>™</sup> Study receives clearance from MHRA and GTAC

London, UK, 6 May 2004: Ark Therapeutics Group plc, the emerging healthcare group, today announces that it has received clearance in the UK from the Medicines and Healthcare Products Regulatory Agency (MHRA) and also full approval from the Gene Therapy Advisory Committee (GTAC) to conduct a confirmatory study of Cerepro<sup>TM</sup>, its novel gene-based medicine for operable malignant glioma (brain cancer). Cerepro<sup>TM</sup> a European and US Orphan Drug, has already completed two efficacy and safety studies producing clinically significant results in patients with this devastating disease. This confirmatory study, in up to 250 patients, is designed to provide further information on the efficacy and safety of the product.

Cerepro<sup>TM</sup> is an adenoviral mediated gene-based medicine (ad.HSV tk) given by multiple injections into the healthy brain tissue of patients, following surgical removal of the solid tumour mass. Cerepro<sup>TM</sup> induces the healthy brain cells surrounding the tumour site to express the enzyme thymidine kinase. Five days after surgery, ganciclovir is given intravenously. The thymidine kinase and ganciclovir react together to produce a substance that specifically kills dividing cells. The healthy neurones surrounding the tumour in the brain are non-dividing and are therefore not susceptible to this substance. In this way Cerepro<sup>TM</sup> harnesses healthy brain cells to help prevent a new tumour from growing. Cerepro<sup>TM</sup> is suitable for patients with operable gliomas, of which there are approximately 38,000<sup>1</sup> cases each year in Europe and the USA.

Overall, Cerepro<sup>™</sup> has completed three clinical studies to date: the first established the dose and method of administration. The second and third investigated the product's efficacy and safety. The data from the third study will be presented at the American Society of Gene Therapy (ASGT) conference on 5<sup>th</sup> June 2004. Results from the two trials published to date have been very encouraging indicating an almost doubling of average survival time, together with an acceptable safety profile.

Dr Nigel Parker, CEO of Ark, commented: "We are very pleased to have received both approvals at this time. As in the early days of monoclonal antibodies, there are all sorts of myths surrounding the difficulties of obtaining regulatory clearances for DNA-based medicines. This news should help give reassurance that the barriers are not insurmountable. The Cerepro<sup>TM</sup> results to date are extremely encouraging and the product offers new hope to malignant glioma sufferers."

Dr Alan Boyd, Research and Development Director at Ark, commented: "Clinical trials of products like Cerepro<sup>TM</sup> require dual agency approvals and the fact that we have fully satisfied both agencies in the UK is a solid endorsement of our approach to the development of these types of products, as well as the quality of Ark's science, medicine and clinical investigators. We will be performing this study internationally and will continue with the regulatory process in the various countries."

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<sup>1</sup> Source: Ark Research



#### For further information, please contact:

Ark Therapeutics Group plc
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Dr Alan Boyd, Director of Development

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Financial Dynamics
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#### **Notes to Editors**

Malignant glioma is a devastating and fatal form of brain tumour. The current standard therapy involves surgically removing the solid tumour mass (when possible) and undertaking radiotherapy and/or chemotherapy. Even with the latest approved treatments, most patients die within one year of diagnosis, with average survival being about eight months. Little therapeutic progress has been made in recent years and the prognosis for malignant glioma patients is poor. A high unmet clinical need exists for new treatments that prolong life in this devastating disease.

#### Ark Therapeutics Group plc

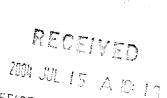
Ark is an emerging healthcare group (the "Group") with one product introduced into hospitals and three further lead products in late stage clinical development. Capitalising on over ten years of research in vascular biology and gene-based medicine, Ark has a balanced portfolio of proprietary healthcare products targeted at specific unmet clinical needs within vascular disease and cancer. These are large and growing markets, where opportunities exist for effective new products to generate significant revenues.

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## Second Cerepro<sup>™</sup> efficacy and safety study results in malignant glioma to be presented at American Society of Gene Therapy – June 2004

London, UK, 5 May 2004: Ark Therapeutics Group plc, the emerging healthcare group, today announces that the results of its second efficacy and safety study of Cerepro<sup>™</sup> for the treatment of patients with operable malignant glioma, will be presented at this year's annual meeting of the American Society of Gene Therapy (ASGT) in Minneapolis. The presentation, to be given by Professor Seppo Ylä-Herttuala<sup>1</sup>, is scheduled to take place on June 5<sup>th</sup> 2004, during the Scientific Symposia Session. The ASGT annual meeting is recognised as one of the world's leading forums for the presentation of advances in gene-therapy and gene-based medicine to the medical and scientific community.

Cerepro<sup>TM</sup>, which has Orphan Drug Status in both the US and Europe, is being developed for the treatment of patients with operable high-grade glioma, a devastating and fatal form of brain tumour. The current standard therapy involves surgically removing the solid tumour mass (when possible) and undertaking radiotherapy and/or chemotherapy. Even with the latest approved treatments, most patients die within one year of diagnosis, with average survival being about eight months. Little therapeutic progress has been made in recent years and the prognosis for malignant glioma patients is poor. A high unmet clinical need exists for new treatments that prolong life in this devastating disease. Cerepro<sup>TM</sup> is suitable for patients with operable gliomas of which there are approximately 38,000<sup>2</sup> cases each year Europe and the USA.

Cerepro<sup>TM</sup> has completed three clinical trials to date, the first published in Human Gene Therapy in 1998, established the dose and method of administration. The second, an open label efficacy and safety study, was published in Human Gene Therapy in 2000. At ASGT, the data will be presented from the third trial, a randomised, controlled, efficacy and safety study. The results of the two trials published to date have been very encouraging, almost doubling glioma patient's average survival times and demonstrating an acceptable safety profile.

Dr Nigel Parker, CEO of Ark, commented: "Naturally we are very pleased that the Cerepro™ data will be presented at ASGT - we could not have wished for a better forum. It is a very exciting product and the results to date are not only encouraging in their own right, but they also give an indication of the significant contribution gene-based medicines could make to improving clinical outcomes in areas of unmet clinical need. We look forward to seeing the full trial results being presented on the day."

<sup>2</sup> Source: Ark Research

<sup>&</sup>lt;sup>1</sup> Prof. YlaHerttuala is Consultant Director of Molecular Medicine to Ark Therapeutics plc.

#### For further information, please contact:

Ark Therapeutics Group plc
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#### **Notes to Editors**

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#### ARK THERAPEUTICS GROUP PLC - CHANGE OF COMPANY SECRETARY

19 April 2004, London UK: Ark Therapeutics Group plc ("Ark" or the "Company"), the emerging healthcare group, today announces that Martyn Williams, the Company's Chief Financial Officer, has handed over his company secretarial duties to Nick Plummer, the newly appointed General Counsel. Nick becomes Company Secretary as of today.

Prior to joining Ark on 13<sup>th</sup> April 2004, Nick Plummer LLB, aged 33, worked as a corporate lawyer for over eight years at the international law firm Ashurst.

**ENDS** 

**Enquiries:** 

**Ark Therapeutics** 

Martyn Williams, Chief Financial Officer

Tel: 0207 388 7722





#### Ark wins Drug Tariff listing for Kerraboot®

17 March 2004, London UK: Ark Therapeutics Group plc, the emerging healthcare group, today announces that it has received Drug Tariff approval for Kerraboot<sup>®</sup>. The novel wound management device for leg and foot ulcers has received approval at £14 per Kerraboot<sup>®</sup>, and will be listed in the Drug Tariff from 1st May 2004, allowing it to be prescribed on the NHS for patients in the community.

Kerraboot<sup>®</sup> provides a new approach to the management of foot and leg ulcers in the form of an easy to apply non-pressurised boot-like dressing. Lower leg and foot ulceration affects 15%<sup>10</sup> of diabetics in the UK and approximately 1% of the adult population<sup>9</sup>. The global market for wound care products was in excess of \$5.8 billion<sup>8</sup> in 2002 and is predicted to grow to over \$7 billion<sup>8</sup> by 2008, yet despite the range of current treatments there is still a large unmet need for effective treatment options in this area of therapy.

Studies have shown Kerraboot® to be comfortable, quick to change and pain free. The design incorporates a number of advanced medical device materials that generate a warm, moist environment for healing, while facilitating the draining and isolation of exudates from the ulcerated area. Substances such as matrix metalloproteases, which inhibit angiogenesis, are reduced, allowing natural growth factors, such as Vascular Endothelial Growth Factors (VEGF), to stimulate healing. Studies have shown that Kerraboot® reduces ulcer size by up to 60% over a four week period and provides an effective barrier against wound odour, a common and embarrassing problem for patients.

Kerraboot<sup>®</sup> is extremely cost effective and could potentially reduce treatment costs by as much as 40% over a twelve week period, particularly for patients who usually require multiple dressings for their ulcer. Managing leg and foot ulcers in the community constitutes a significant proportion of the district nurse workload - it has been estimated that around 22% of their time is spent in this area<sup>1</sup>. It has been calculated<sup>2</sup> that the average cost of each visit made by a community-based nurse is £53. It is expected that the majority of patients will be able to change Kerraboot<sup>®</sup> themselves, resulting in a significant positive impact on community nursing time and costs. Kerraboot<sup>®</sup> may also be able to replace multiple dressing items often currently used on each patient, thereby saving further NHS costs.

In clinical studies<sup>3</sup> covering a range of patients and ulcer types, Kerraboot<sup>®</sup> has been shown to reduce the nursing time required to change ulcer dressings by an average of 70%. In the case of one individual patient, this meant a dressing change time of only 2 minutes with Kerraboot<sup>®</sup>



compared to an estimated average of 30 minutes for standard dressings, this is a time reduction of around 83%.

Healthcare professionals and patients have welcomed the Drug Tariff Listing for Kerraboot<sup>®</sup>. Commenting on this news, Ali Foster, Lead Clinical Specialist Podiatrist at The Diabetic Foot Clinic, King's College Hospital, London, said: "The management of leg and foot ulcers in the UK places a huge burden on NHS resources and new approaches to ease this burden such as Kerraboot<sup>®</sup> are welcomed. Its unique design allows easy inspection of the wound, which is a real benefit for healthcare professionals and patients. Availability of Kerraboot<sup>®</sup> in the community as well as hospitals will allow the continuity of care that is so vital to achieving good outcomes for patients."

Dr. Nigel Parker, CEO of Ark, commented: "We are delighted that Kerraboot<sup>®</sup> has received NHS Drug Tariff approval at a price in line with our expectations. The listing highlights the importance of Kerraboot<sup>®</sup> in its ability to improve patient outcomes whilst reducing the cost of care. Kerraboot<sup>®</sup> was introduced into hospitals late last year and has had a very encouraging response to date. We now plan to increase our sales focus and service the key accounts in the community."

#### -Ends-

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**Financial Dynamics**David Yates
Lucy Briggs

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#### Notes to Editors: Kerraboot®

- Of the estimated 1.2 million people with diabetes in the UK, up to 10% are affected by foot ulceration at any one time
  and in the majority of cases (90%), diabetic neuropathy is an underlying factor<sup>4</sup>.
- Ultimately 25%<sup>5</sup> of patients will end up having some form of lower limb amputation which equates to half of all lower limb amputations in the UK.
- Each year nearly 5 000 lower limb amputations take place in the UK at an estimated cost to the NHS of £38 million<sup>6</sup>.
- Venous leg ulcers may affect up to 3.5% of the general population at some stage in their life<sup>7</sup>. Compression bandaging is the standard practice involving costly dressings and highly trained nursing skills. However, a significant proportion of venous ulcer patients are unable to tolerate compression therapy or have ulcers that are inappropriate for this form of treatment.
- Kerraboot has been available in UK hospitals since November 2003, and was listed as a medical device by the FDA
  in December 2003.

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#### ARK THERAPEUTICS GROUP PLC

Not for release or distribution or publication in whole or part in or into the United States, Canada, Japan or Australia

Ark Therapeutics Group plc ("Ark" or the "Company")

For immediate release

3 March 2004

#### **Ark Announces Successful Completion of IPO**

Offering raises £55 million, valuing Ark at £168 million

Ark today announces that it has successfully completed its Initial Public Offering in connection with its listing on the London Stock Exchange. The shares being sold in the IPO have been priced at 133 pence per share (the "Offer Price"), at which price the Company will have a market capitalisation on listing of approximately £168 million.

#### **Details of the Offer**

- The offer comprises an aggregate of 41,555,996 shares, corresponding to a total offer size of approximately £55 million, of which all were new ordinary shares issued by Ark with the exception of 142,000 shares which were being sold by three existing Finnish shareholders.
- Based on the Offer Price of 133 pence per share, and the total number of shares in issue of 126,220,994, the market capitalisation of the Company at listing will be approximately £168 million.
- The offer generated a broad base of interest and was more than three times over subscribed at the
  Offer Price. As a result, the Company has attracted a good geographic spread of investors from the
  UK, continental Europe and the US.
- Conditional dealings will commence at 08:00 on 3 March 2004 on the London Stock Exchange. It is
  expected that the listing will become effective and unconditional dealings will commence at 08:00 on
  8 March 2004 under the ticker symbol AKT.L.
- In connection with the offer, Credit Suisse First Boston (Europe) Limited ("Credit Suisse First Boston") has been granted an option (the "Over-allotment Option") by the Company to purchase up to an additional 6,233,399 shares at the Offer Price to cover over-allotments, if any, and to cover short positions arising from stabilisation transactions. The Over-allotment Option will be exercisable

for a period of 30 days after the admission of the ordinary shares to the Official List of the United Kingdom Listing Authority.

 Credit Suisse First Boston Equities Limited acted as sole bookrunning lead manager and Credit Suisse First Boston (Europe) Limited acted as sole sponsor for the global offer. Nomura International plc acted as co-lead manager.

Commenting on the announcement, Nigel Parker, Chief Executive of Ark, said:

"We are delighted to have successfully completed our IPO, the first in our sector on the UK main market for a number of years. The funds raised will place Ark in a strong position to take its late stage product portfolio through to commercial launch. We look forward with confidence to our future as a quoted company."

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Ark Therapeutics Group plc

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Nigel Parker, Chief Executive

Martyn Williams, Chief Financial Officer

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Steve Adkin Jamie Adams

#### **Further information**

Ark is an emerging healthcare group (the "Group") with one product introduced into hospitals and three further lead products in late stage clinical development. Capitalising on over ten years of research in vascular biology and gene-based medicine, Ark has created a balanced portfolio of proprietary healthcare products targeted at specific unmet clinical needs within vascular disease and cancer. These are large and growing markets, where opportunities exist for effective new products to generate significant revenues.

Ark's products are sourced from related but largely non-dependent technologies within the Group and have been selected to enable Ark to take each product through development within its own means and to benefit from Orphan Drug Status and/or Fast Track Designation, as appropriate. This strategy has allowed the Group to retain greater value and greater control of clinical development timelines, and to mitigate the risks of dependency on any one particular programme or development partner. Ark has secured patents or has patent applications pending for all its lead products in principal pharmaceutical markets. During development, the Group retains the right to market its lead products in the key North American and European markets.

Ark has its origins in businesses established in the mid-1990s by Professor John Martin and Dr Stephen Barker of University College London and Professor Seppo Ylä-Herttuala of the Al Virtanen Institute at the University of Kuopio, Finland, all of whom continue to play leading roles in the Company's research and development programmes.

The Directors believe that the Group's product portfolio, the commencement of product revenues, its balance of risk and its policy of retaining value and control place Ark in a strong position as an emerging healthcare group.

#### **Lead Products**

Ark's four lead products, each of which has originated from the research work of its world-renowned scientific and clinical teams based in Finland and the UK, are summarised below:

Cerepro<sup>™</sup>

a novel gene-based therapy for the treatment of patients with certain operable brain tumours, which has almost doubled mean survival time, when compared to existing standard treatment, in two safety and efficacy studies. This product has been awarded Orphan Drug Status by both the FDA and EMEA, and the Company currently expects that first filing for EU marketing approval will occur before the end of 2007.

Vitor™

an oral therapy for the treatment of muscle wasting (cachexia) that occurs in patients with cancer. Currently in Phase III trials due for completion in 2004, Ark has received Fast Track Designation from the FDA. The Company currently expects that first filing for EU marketing approval will occur in 2005.

Trinam<sup>®</sup>

a novel gene-based therapy and biodegradable delivery device. The first application for which Trinam® is being developed is the prevention of the blocking

of the plastic tubes implanted into the arms of patients with kidney failure to enable life-saving haemodialysis. Approved for Phase II/III trials, the FDA has awarded it Orphan Drug Status. The Company currently expects that first filing for EU marketing approval will occur in 2007.

Kerraboot®

a novel wound dressing device for leg and foot ulcers introduced to hospitals in the UK in November 2003. It has been listed with the FDA, allowing it to be marketed in the US.

#### Follow-on Portfolio

Ark's lead products are supported by a strong follow-on portfolio of products and pre-clinical pipeline. The follow-on products, each focus on areas of clear unmet medical need, and comprise a potential treatment in Phase II (EG005) for a fat metabolism disorder (lipodystrophy) which can occur in HIV positive patients receiving antiretroviral therapy, and an *in vitro* diagnostic test (EG010) which predicts the likelihood of a serious cardiac event (e.g. heart attack), which the Directors believe will be amongst the first to comply with EU and US equivocal zone requirements. Ark's pre-clinical portfolio of programmes comprises peptides, small molecules and DNA/gene-based medicines and platforms that are all well progressed – mostly to *in vivo* proof of principle.

These written materials are not for distribution in the United States, Canada, Japan or Australia. The information contained herein does not constitute an offer of securities for sale in the United States, Canada, Japan or Australia. Securities may not be offered or sold in the United States absent registration under the US Securities Act or an exemption therefrom. Ark has not and does not intend to register any of its securities under US securities law. Accordingly, the securities may not be offered or sold in the United States unless they are registered or exempt from registration under applicable law or in transactions that are exempt from registration. The securities will not be offered or sold to the public in the United States.

This announcement has been issued by Ark and is the sole responsibility of Ark and has been approved solely for the purposes of Section 21 of the Financial Services and Markets Act 2000 by Credit Suisse First Boston (Europe) Limited of One Cabot Square, London E14 4QJ. Credit Suisse First Boston (Europe) Limited, which is regulated in the United Kingdom by the Financial Services Authority, is acting for Ark and no-one else in connection with this matter and will not be responsible to any other person for providing the protections afforded to clients of Credit Suisse First Boston (Europe) Limited or for providing advice in relation to this matter. Nomura International plc, which is regulated in the United Kingdom by the Financial Services Authority, is acting for Ark and no-one else in connection with this matter and will not be responsible to any other person for providing the protections afforded to clients of Nomura International plc or for providing advice in relation to this matter.

This announcement does not constitute or form part of an offer, or any solicitation of an offer, for securities and any purchase of or application for shares in the offering should only be made on the basis of information contained in the formal listing particulars to be issued in connection with the offering. The price and value of, and income from, shares may go down as well as up. Persons needing advice in relation to any of the matters referred to herein should consult a professional adviser.

Stabilisation/FSA



### Not for release or distribution or publication in whole or part in or into the United States, Canada, Japan or Australia

Ark Therapeutics Group Limited ("Ark" or the "Company")

For immediate release

17 February 2004

#### **Ark Therapeutics Group Announces Intention to Float**

Ark today announces its intention to proceed with an Initial Public Offering of shares and to seek a listing on the London Stock Exchange. Ark is an emerging healthcare group with one product introduced into hospitals and three further products in late stage clinical development. Capitalising on over ten years of research in vascular biology and gene-based medicine, Ark has created a balanced portfolio of proprietary healthcare products targeted at specific unmet clinical needs within vascular disease and cancer. These are large and growing markets, where opportunities exist for effective new products to generate significant revenues.

Ark is seeking to raise gross proceeds of approximately £55 million through a placing of ordinary shares to institutional investors in the UK and certain other jurisdictions. The indicative price range has been set at 120 pence to 146 pence per share corresponding to a pre-money valuation of £110 million to £135 million. The offering is expected to be completed by mid-March. The Company intends to use the net proceeds from the offering for the continued development of its lead product candidates, investment in manufacturing capacity, commercial launch of and subsequent sales and marketing for products as they receive marketing approval, other research and development activities, and for working capital and general corporate purposes.

Commenting on the announcement, Nigel Parker, Chief Executive of Ark, said:

"Ark has a broadly-based portfolio of late stage products, all of which have been derived from our own science and address areas of unmet clinical need. Each of these products represents an attractive market opportunity and, having retained the right to market all our lead products in the key North American and European markets, we believe that Ark is well placed to succeed."

#### **Advisers**

Credit Suisse First Boston Equities Limited has been appointed sole bookrunning lead manager and Credit Suisse First Boston (Europe) Limited has been appointed sole sponsor for the global offer. Nomura International plc is acting as co-lead manager.

Enquiries at:

#### Ark Therapeutics Group Limited

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Nigel Parker, Chief Executive

Martyn Williams, Chief Financial Officer

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Jamie Adams

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**David Yates** 

Ben Atwell

#### **Further information**

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a novel wound dressing device for leg and foot ulcers introduced to hospitals in the UK in November 2003. It has been listed with the FDA, allowing it to be marketed in the US.

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Ark's lead products are supported by a strong follow-on portfolio of products and pre-clinical pipeline. The follow-on products, each focus on areas of clear unmet medical need, and comprise a potential treatment in Phase II (EG005) for a fat metabolism disorder (lipodystrophy) which can occur in HIV positive patients receiving antiretroviral therapy, and an *in vitro* diagnostic test (EG010) which predicts the likelihood of a serious cardiac event (e.g. heart attack), which the Directors believe will be amongst the first to comply with EU and US equivocal zone requirements. Ark's pre-clinical portfolio of programmes comprises peptides, small molecules and DNA/gene-based medicines and platforms that are all well progressed – mostly to *in vivo* proof of principle.

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Prior to admission to the Official List of the UK Listing Authority, Ark will be re-registered as a plc and will change its name to Ark Therapeutics Group plc.

Stabilisation/FSA



#### **Ark Therapeutics**

#### Head of Bayer Pharmaceuticals joins Ark Board as non-executive Director

17<sup>th</sup> December 2003, London, UK: Ark Therapeutics is pleased to announce that Dr Wolfgang Plischke, Member of the Bayer HealthCare Executive Committee and President of the Pharmaceuticals Division, has joined the Board of Ark as a non-executive director of the Company.

Commenting on the appointment, Dennis Turner, Chairman of Ark, said: "Dr Plischke is a leading figure in the worldwide pharmaceutical industry and brings a broad knowledge of the market to Ark as well as a wide range of contacts throughout the sector. We are delighted to welcome him to the Board of Ark."

Dr Plischke, aged 52, studied biology at Hohenheim University and started his career in 1980 with Bayer's subsidiary, Miles Diagnostics. In 1988, he was placed in charge of marketing in the Pharmaceuticals Business Group in Germany and in 1991 he was appointed to head International Strategic Marketing.

In 1995, he became Managing Director of Bayer Yakuhin Ltd., Japan, with responsibility for Pharmaceuticals and Consumer Care and, in 2000, he was appointed head of the Pharmaceuticals Business Group in North America. In January 2002, he was promoted to his current position as head of Bayer's global Pharmaceuticals Division.

Enquiries:

**Ark Therapeutics** 

020 7388 7722

Dr Nigel Parker, Chief Executive Martyn Williams, Chief Financial Officer

**Financial Dynamics** 

Ben Atwell Lucy Briggs 0207 269 7242 0207 269 7223

#### **Ark Therapeutics Limited**

Ark Therapeutics Ltd was founded in 1997 as a research based biotechnology company with a clinical focus on cardiovascular diseases and cancer. Over the last five years the Company has demonstrated an expertise to take a broad range of advanced biotechnology research through the various stages of product development. Kerraboot® is the first product to be launched by Ark.

Ark Therapeutics Ltd has operations in the UK and Finland. The company has six products in clinical development derived from its own world-leading expertise in vascular science and molecular medicine.



## Ark Therapeutic's Kerraboot® gets go ahead for launch in the USA

**London, UK, 15<sup>th</sup> December 2003** - Ark Therapeutics Ltd today announces that the FDA have formally listed Kerraboot<sup>®</sup>, a novel dressing system for the management of leg and foot ulcers, as a medical device, allowing the product to be marketed in the US.

Kerraboot<sup>®</sup>, which was launched in the UK in November, provides a new time-saving approach for the management of foot and leg ulcers in the form of an easy to apply, non-pressurised boot-like dressing. The product design incorporates a number of advanced medical device materials which generate a warm, moist environment for healing while facilitating the draining and isolation of exudates from the ulcerated area. Thus, substances such as matrix metalloproteases which can inhibit angiogenesis within the ulcer are reduced allowing natural growth factors, such as Vascular Endothelial Growth Factors (VEGF), to stimulate the re-granulation and healing of the affected area.

Ulceration of the lower limbs affects approximately 1% of the adult population and can cause serious distress, discomfort and embarrassment to patients. One quarter of patients with foot ulcers ultimately require some form of limb amputation (1).

In clinical studies covering a range of patients and ulcer types, Kerraboot® has been shown to be comfortable, easy, quick and pain-free to change and thereby reduces patients' dependency on nurses to dress and redress the area. Both healthcare professionals and patients also rated the product as significantly better than previously used dressings. Following completion of the product registration process, which is anticipated shortly, Kerraboot® is expected to be available for use in the US during 2004 for patients with moderate to heavily exudating foot and leg ulcers.

The user number issued by the FDA to Ark Therapeutics, covers the use of the Kerraboot<sup>®</sup> for the management of foot and leg ulcers. This is the first marketing authorisation to be granted to Ark Therapeutics Ltd in the US.

Dr Nigel Parker, Chief Executive Officer, commented

'Ark has been working hard to turn its expertise in biotechnology and development into meaningful products for the healthcare markets. We have made tremendous progress and are naturally delighted to receive clearance to market our first product in the US, the largest market for foot and leg ulcers, so soon after launching our first product in the UK.'

Dr. Alan Boyd, Director of Development, commented:

'Kerraboot<sup>®</sup> is one of the products to arise from Ark's vascular growth research programme that focuses on the biology of the vascular system and the VEGF family of genes and receptors. Through this work, the company has developed an in-depth understanding of the science of wound healing which has facilitated the development of Kerraboot<sup>®</sup>.'

For further information, please contact:

**Ark Therapeutics** 

020 7388 7722

Dr. Nigel Parker, CEO

Dr. Alan Boyd, Director of Develoment

Financial Dynamics
Ben Atwell / Lucy Briggs

020 7831 3113

#### **Notes to Editors**

#### Foot and Leg Ulcer Facts

#### Key statistics:

- Ulceration of the lower limbs affects approximately 1% of the adult population and can cause serious distress, discomfort and embarrassment to patients (1)
- Foot and leg ulcers are frequently associated with clinical conditions such as rheumatoid arthritis and diabetes
- Up to 15% of all diabetic patients are affected by foot ulceration at some time (2)
- One quarter of patients with foot ulcers ultimately require some form of limb amputation (2).

#### References:

- 1. BriggsM, Nelson EA: Topical agents or dressings for pain in venous leg ulcers; The Cochrane Library, Issue 1, 2002
- 2. Consensus Conference on the Diabetic Foot Wound Care 'Diabetes Care, 7-8 April 1999, Boston, Massachusetts' (Copyright 1999: American Diabetes Association in association with The Gale Group and LookSmart)

#### **Ark Therapeutics Limited**

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Ark Therapeutics Ltd has operations in the UK and Finland. The company has six products in clinical development derived from its own world-leading expertise in vascular science and molecular medicine.



## Ark Therapeutics Launches first UK product Kerraboot® – A Novel Wound Dressing Device

17<sup>th</sup> November 2003, London, UK: Ark Therapeutics today announces the launch of its first product, Kerraboot<sup>®</sup>, a unique boot-shaped wound dressing device set to radically change the management of patients with foot and leg ulcers in the UK.

Kerraboot<sup>®</sup> provides a new time-saving approach to the management of foot and leg ulcers in the form of an easy to apply, non-pressurised, boot-like dressing. The design incorporates a number of advanced medical device materials which generate a warm, moist environment for healing while facilitating the draining and isolation of exudates from the ulcerated area. Thus, substances such as matrix metalloproteases which can inhibit angiogenesis (the growth of new blood vessels) within the ulcer are reduced allowing natural growth factors, such as Vascular Endothelial Growth Factors (VEGF), to stimulate the re-granulation and healing of the affected area.

Kerraboot<sup>®</sup> has been rated by both healthcare professionals and patients as significantly better than previously used dressings. The results of clinical studies covering a range of patients and ulcer types, show that Kerraboot<sup>®</sup> is comfortable, and can be changed quickly and without pain, thereby reducing patients' dependency on nurses<sup>(1)</sup> to repeatedly dress the area.

Commenting on the launch, Paul Higham, Commercial Director of Ark, states, "The global market for wound care products was in excess of \$5.8 billion in 2002 and is predicted to grow to over \$7 billion by 2008. Despite the enormous range of dressing types already available for ulcer management, there is still a large unmet need for effective treatment options in this area of therapy. We are confident that Kerraboot® can significantly improve the way leg and foot ulcers are currently managed, as well as offering benefits to the standard of care for patients. Kerraboot® could potentially reduce treatment costs by as much as 40% over a twelve week treatment period."



Nigel Parker, Chief Executive of Ark, concludes, "Ark is very pleased to announce the launch of its first product into the UK market. We have incorporated our extensive experience of both the clinical aspects of lower limb ulcers and angiogenesis in the healing process to develop the Kerraboot<sup>®</sup>. This is another important step for the Company towards achieving its goal of being an established provider of healthcare products in areas of unmet medical need.

The manufacturing of Kerraboot<sup>®</sup> will be undertaken by Flexicare Ltd, the medical device manufacturers officially appointed by Ark on October 15<sup>th</sup> this year.

#### - Ends -

For further information please contact:

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Paul Higham, Director of Commercial Development	

 Financial Dynamics

 Ben Atwell
 0207 269 7242

 Lucy Briggs
 0207 269 7223



#### Notes to Editors - Foot and Leg Ulcer Facts

Key statistics are:

- o Ulceration of the lower limbs affects approximately 2% of the adult population and can cause serious distress, discomfort and embarrassment to patients
- o Foot and leg ulcers are frequently associated with clinical conditions such as rheumatoid arthritis and diabetes
- o In the UK, 15% of all diabetic patients are affected by foot ulceration at some time (2)
- o District nurses spend up to 25% of their time dressing and redressing the wounds in the community and as such, current approaches to the treatment of leg and foot ulcers represent a significant burden to the NHS.
- o One quarter of patients suffering from foot ulcers if left untreated would require some form of limb amputation <sup>(3)</sup>, accounting for half of all lower limb amputations <sup>(4)</sup>
- o Existing product treatment costs on an individual patient basis range from £1,100 to over £5,000 per patient per year, without allowing for healthcare labour costs.

#### **Ark Therapeutics Limited**

Ark Therapeutics Ltd was founded in 1997 as a research based biotechnology company with a clinical focus on cardiovascular diseases and cancer. Over the last five years the Company has demonstrated an expertise to take a broad range of advanced biotechnology research through the various stages of product development. With the launch of its first product in the UK today, Ark is well placed to emerge as one of Europe's new and successful Healthcare Companies.

Ark Therapeutics Ltd has operations in the UK and Finland. The company has six products in clinical development derived from its own world-leading expertise in vascular science and molecular medicine.

#### Flexicare Ltd

Flexicare's experience and expertise in design, development and manufacturing of medical devices extends back over 25 years. The company has a strong commitment to advanced manufacturing techniques and continuous product innovation, together with a clear understanding of current market priorities to develop and manufacture products to improve patient care while reducing cost.

Flexicare Medical's headquarters is based in Mountain Ash in South Wales, United Kingdom. All manufacturing processes are carried out in clean rooms within a modern purpose-built manufacturing facility.

#### References:

- 1. Leigh R, Rahaman L, Barker S, Hurel S. Management of neuropathic and neuroischaemic leg and foot ulcers: A preliminary assessment of a novel wound dressing device; the Kerraboot<sup>®</sup>. Diabetes UK Annual Professional Conference, 2003.
- 2. Jiwa F. Diabetes in the 1990's An Overview. Stat Bull Metrop Insur Co. 1997 Jan- Mar 78(1):2 8.
- 3. American Diabetes Association (1999) Consensus Development Conference on diabetic foot wound care. Diabetes care 22(8); 1354-60.
- 4. Alexandria V.A, Diabetes 1996 Vital statistics; American Diabetes Association.

# RECEIVED



## OFFICE OF INTERNATIONARK Granted Patent in Europe for Kerraboot® a novel device for leg and foot ulcers

**London, UK, 29<sup>th</sup> October 2003** - Ark Therapeutics Ltd today announces that it has been issued with a patent by the European Patent Office for Kerraboot<sup>®</sup>, it's novel dressing device for the management of leg and foot ulcers.

Kerraboot® provides a new time-saving approach to the management of foot and leg ulcers in the form of an easy to apply, non-pressurised boot-like dressing. The product design incorporates a number of advanced medical device materials which generate a warm, moist environment for healing while facilitating the draining and isolation of exudates from the ulcerated area. Thus, substances such as matrix metalloproteases which can inhibit angiogenesis within the ulcer are reduced allowing natural growth factors, such as Vascular Endothelial Growth Factors (VEGF), to stimulate the re-granulation and healing of the affected area.

Ulceration of the lower limbs affects approximately 2% of the adult population and can cause serious distress, discomfort and embarrassment to patients. Up to 25% of Community Nursing time is spent attending to leg ulcer dressings. One quarter of patients with foot ulcers ultimately require some form of limb amputation (2), accounting for half of all lower limb amputations in the UK (3).

In clinical studies covering a range of patients and ulcer types, Kerraboot™ has been shown to be comfortable, easy, quick and pain-free to change and thereby reduces patients' dependency on nurses to dress and redress the area. Both healthcare professionals and patients also rated the product as significantly better than previously used dressings. Following completion of product registration process, which is anticipated shortly, Kerraboot® is expected to be available for use by the autumn of 2003 for patients with moderate to heavily exudating foot and leg ulcers.

Patent Number 1162932 granted by the European Patent Office to Ark Therapeutics, covers the use of the Kerraboot® for the management of foot and leg ulcers. The granted patent can be maintained for a period of 20 years from the filing date of January 1999. This is the first patent to be granted to Ark Therapeutics Ltd by the European Patent Office. Following CE marking, Kerraboot® is expected to be available for use in the UK later this year.

Dr. Alan Boyd, Director or Development, commented:

"Kerraboot<sup>®</sup> is one of the products to arise from Ark's vascular growth research programme that focuses on the biology of the vascular system and the VEGF family of genes and receptors. Through this work, the company has developed an in-depth understanding of the science of wound healing and this has facilitated the development of the Kerraboot<sup>®</sup>. Once available, the Kerraboot<sup>®</sup> should bring benefits to both, patients and the people that look after them."

Mr. Paul Higham, Director of Commercial Development, commented:

"Chronic skin ulcers of the lower limb and foot are very common in diabetic patients and the elderly, with current methods of treatment requiring the application of multiple products often used in combination. Doctors, other healthcare professionals and patients have identified important limitations of current products in that they are cumbersome to use and that they are time consuming and painful to apply and change. The Company is looking forward to making the product available once the development is complete."

-Ends-



#### For further information, please contact:

Ark Therapeutics

020 7388 7722

Dr Alan Boyd, Director of Development

Mr. Paul Higham, Director of Commercial Development

**Financial Dynamics** 

020 7831 3113

Ben Atwell / David Yates

#### **Notes to Editors**

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#### References:

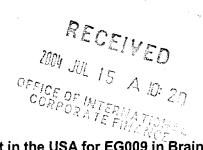
- 1. Jiwa F. Diabetes in the 1990's An Overview. Stat Bull Metrop Insur Co. 1997 Jan- Mar, 78(1):2 8
- 2. Consensus Conference on the Diabetic Foot Wound Care
- 3. Alexandria V.A, Diabetes 1996 Vital statistics; American Diabetes Association.
- 4. Ragnarson-Tennvall G, Apelqvist J. A Review of the Cost Effective Management of Diabetic Foot Ulcers. Pharmacoeconomics 1997;July:12(1):42-43

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## Ark Therapeutics granted first Patent in the USA for EG009 in Brain Cancer Treatment

**London, UK, 27<sup>th</sup> October 2003** - Ark Therapeutics Ltd today announces that it has been granted a patent in the USA for EG009, its gene-based therapy for brain cancer (malignant glioma). The US patent (no. 6,579,855) covers the use of EG009 for treating malignant glioma patients following surgical removal of the solid tumour mass and provides intellectual property protection for 20 years from the filing date of November 1998. This is the first patent to be granted to Ark Therapeutics by the US Patent Office.

Malignant glioma, a cancerous tumour that occurs in the brain, is a devastating and fatal disease where, even with the latest treatments, most patients die within a year of diagnosis. Once diagnosed, the outlook for malignant glioma patients remains very poor and there is an urgent need for effective new treatments to prolong life.

EG009 is an adenoviral mediated gene medicine (HSV tk) given by multiple injections into the healthy brain tissue of patients following surgical removal of the solid tumour mass. In the following days, a pro-drug, ganciclovir, is given intravenously. Once treated, healthy brain cells surrounding the site where the tumour was removed express the enzyme thymidine kinase. This converts the ganciclovir to a substance which specifically kills dividing cells. The healthy neurones surrounding the tumour in the brain are non-dividing and are therefore not susceptible to this substance. Thus EG009 specifically kills pre-cancerous new tumour cells as they try to replicate to form a new tumour. EG009 has been developed for injection into healthy brain tissue following the removal of the solid tumour mass and as such is only suitable for patients with operable gliomas. This represents about 55% of all malignant glioma cases.

The first safety and efficacy study conducted by Ark has shown that EG009 treatment was well tolerated and produced an 80% increase in the average patient survival time, from eight months to 15 months. A second, larger, safety and efficacy study, where EG009 is being compared to standard care controls, is nearing completion.

Dr Nigel Parker, Chief Executive Officer of Ark Therapeutics, commented:

"Ark's ethos is to combine an understanding of the biology of diseases with the latest molecular medical research technologies to develop much needed new medicines and healthcare products. We are encouraged by the results of EG009 to date and are naturally delighted that the novelty of the medicine has been confirmed with the grant of the US patent."

Dr Alan Boyd, Director of Development at Ark Therapeutics, commented:

"Malignant glioma is notoriously difficult to treat and we believe that EG009 could provide a significant therapeutic advance in this area. We are optimistic that our earlier results will be confirmed, and if so, EG009 has the potential to fulfil the urgent need for new treatments for this devastating disease."



For further information, please contact:

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Dr Nigel Parker, Chief Executive Officer Dr Alan Boyd, Director of Development

**Financial Dynamics** 

020 7831 3113

David Yates / Ben Atwell

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#### **Ark Therapeutics Limited**

Ark Therapeutics Ltd was founded in 1997 as a research based biotechnology company with a clinical focus on cardiovascular diseases and cancer. Over the last five years the Company has demonstrated an expertise to take a broad range of advanced biotechnology research through the various stages of product development. With the launch of its first product in the UK and USA predicted for late this year, Ark is well placed to emerge as one of Europe's new and successful Healthcare Companies.

Ark Therapeutics Limited has operations in the UK and Finland. The company has six products in clinical development derived from its own world-leading expertise in vascular science and molecular medicine.



For Immediate Release

# Ark Therapeutics appoints Flexicare as manufacturer of Kerraboot®

# Appointment signals preparation for launch of Kerraboot® - Ark's first product

**London UK** 15 October 2003: Ark Therapeutics Ltd, announces the appointment of Flexicare Ltd, for the production of Kerraboot<sup>®</sup> Ark's novel dressing device for foot and leg ulcers. Flexicare Ltd, are manufacturing Kerraboot<sup>®</sup> for Ark to commercialise in European markets. Financial details of the transaction have not been disclosed.

Kerraboot® provides a new time-saving approach to the management of foot and leg ulcers in the form of an easy to apply, non-pressurised boot-like dressing. The product design incorporates a number of advanced medical device materials which generate a warm, moist environment for healing while facilitating the draining and isolation of exudates from the ulcerated area. Thus, substances such as matrix metalloproteases which can inhibit angiogenesis within the ulcer are reduced allowing natural growth factors, such as Vascular Endothelial Growth Factors (VEGF), to stimulate the regranulation and healing of the affected area.

Ulceration of the lower limbs affects approximately 2% of the adult population and can cause serious distress, discomfort and embarrassment to patients. Up to 25% of Community Nursing time is spent attenting to leg ulcer dressings. One quarter of patients with foot ulcers ultimately require some form of limb amputation, accounting for half of all lower limb amputations.

In clinical studies covering a range of patients and ulcer types, Kerraboot® has been shown to be comfortable, easy, quick and pain-free to change and thereby reduces patients' dependency on nurses to dress and redress the area. Both healthcare professionals and patients rated the product as significantly better than previously used dressings. Following completion of the product registration process, which is anticipated shortly, Kerraboot® is expected to be available for use by the autumn of 2003 for patients with moderate to heavily exudating foot and leg ulcers.

Nigel Parker, Chief Executive of Ark said, "Kerraboot® has been developed to incorporate Ark's extensive experience of both the clinical aspects of leg ulcers and the vascular growth factor science inherent in the healing process. During the product's development we have worked with various specialist materials development technologists and in this lead up period to launch we believe the appointment of Flexicare as the manufacturing partner is the most appropriate choice for us."



Paul Higham, Commercial Director of Ark commented, "There remains a very significant unmet need in the treatment of foot and leg ulcers, and at Ark, we are confident that Kerraboot® could significantly change the way ulcers are managed. With care and dressings for leg ulcers in the UK alone estimated to cost the NHS up to £600 million per year, we believe that Kerraboot® has a very significant sales potential while at the same time having the potential to reduce the overall cost burden of treating leg ulcers to the NHS."

-Ends-



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Dr Nigel Parker, Chief Executive

Paul Higham, Director of Commercial Development

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Sarah MacLeod

## Notes to Editors Foot and Leg Ulcer Facts

#### Key statistics are:

- Ulceration of the lower limbs affects approximately 2% of the adult population and can cause serious distress, discomfort and embarrassment to patients
- Foot and leg ulcers are frequently associated with clinical conditions such as rheumatoid arthritis and diabetes
- In the UK, 15% of all diabetic patients are affected by foot ulceration at some time (1)
- District nurses spend up to 25% of their time dressing and redressing the wounds in the community and as such, current approaches to the treatment of leg and foot ulcers represent a significant burden to the NHS.
- One quarter of patients with foot ulcers ultimately require some form of limb amputation (2), accounting for half of all lower limb amputations (3)
- Existing product treatment costs on an individual patient basis range from £1,100 to over £5,000 per patient per year, without allowing for healthcare labour costs.

#### References:

- 1. Jiwa F. Diabetes in the 1990's An Overview. Stat Bull Metrop Insur Co. 1997 Jan- Mar,78(1):2 8
- 2. Consensus Conference on the Diabetic Foot Wound Care
- 3. Alexandria V.A, Diabetes 1996 Vital statistics; American Diabetes Association.

## **Ark Therapeutics Limited**

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#### Flexicare Ltd

Flexicare's experience and expertise in design, development and manufacturing of medical devices extends back over 25 years. The company has a strong commitment to advanced manufacturing techniques and continuous product innovation, together with a clear understanding of current market priorities to develop and manufacture products to improve patient care while reducing cost.

Flexicare Medical's headquarters is based in Mountain Ash in South Wales, United Kingdom. All manufacturing processes are carried out in clean rooms within a modern purpose-built manufacturing facility.





#### **Ark Therapeutics**

# Report Ranks Ark's Scientists Amongst World Leaders In Cardiovascular Gene Therapy

London, UK, 15 August 2003: The research of Ark's scientists into the use of gene therapy in the treatment of cardiovascular diseases has been ranked amongst the best in the world, a recent independent report has concluded. The research group is led by Professor Seppo Yla-Herttuala of the A.I. Virtanen Institute for Molecular Sciences at the University of Kuopio, Finland, who was a co-founder of London-based biotechnology company, Ark Therapeutics. A number of Ark's leading clinical products have been derived from his research and Ark has its laboratories and manufacturing facilities attached to the Institute.

The report, evaluating the work of the A.I. Virtanen Institute, was prepared by a group of expert scientists led by Ralf F. Pettersson, who is also Chairman of the Nobel Prize Committee for Physiology and Medicine. It concluded that "Some of the research programs are at the international cutting edge. This is particularly true for the program on gene therapy for cardiovascular diseases, which the Scientific Advisory Board ranks amongst the top three in the world. Professor Seppo Yla-Herttuala's research is without question the flagship of the Institute."

Since 1995, Professor Yla-Herttuala has developed the University of Kuopio's gene therapy unit into one of the most active centres in Europe, with experience in ten human gene therapy trials on over 200 patients to date. He is a world-renowned expert in gene expression technology and the pathogenesis of vascular disease, including pioneering work in vascular gene therapy where he performed the first adenoviral gene transfers to human peripheral arteries. He was responsible for the discovery of two of Ark's gene-based products: EG009, a treatment for malignant glioma (brain cancer) and Trinam, which prevents the blocking of blood vessels after surgery.

The importance of gene-based medicines has been highlighted by the recent announcement of the UK Government's intention to invest £50 million in genomics and gene therapy. This highly innovative area of research offers enormous potential to radically alter and improve healthcare through the more accurate diagnosis of disease, the introduction of gene-based medicines, and new therapies to treat patients according to their own individual genetic profile.

Since its inception in 1997, Ark has emerged as one of the few European companies to have successfully transitioned from being research based to focusing on generating revenues through its own product sales. Ark now has one of the most advanced product portfolios in Europe, with the launch of its first product in the US and EU expected later this year. The Company has four further products in late-stage (Phase II-III) clinical development.

Dr Nigel Parker, Chief Executive of Ark, commented: "The findings of this report confirm that Ark has access to some of the world's leading science in gene-based medicine, which is benefiting our pipeline today and will continue to do so in the future."



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#### **Notes to Editors**

#### **Ark Therapeutics Limited**

Ark Therapeutics Limited is a European biotechnology company focused on the development of therapeutics for vascular diseases and cancer. With operations in the UK and Finland, the company has six products in clinical development derived from its own world-leading expertise in vascular science and molecular medicine.

By concentrating on specialist areas of unmet clinical need, the Company plans to commercialise products through its own targeted sales infrastructure and where appropriate through co-operative agreements with partners.

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## **Ark Therapeutics Limited**

# Optimised peptide EG3306 inhibits Retinal Neovascularisation in vivo

## Potential applications in the treatment of ocular disease

London, UK – 21 March 2003: Ark Therapeutics ("Ark") announces the publication of the results of the Company's optimised 7mer peptide, EG3306, in inhibiting angiogenesis (blood vessel proliferation) in the eye.

The study, published today in Biochemical and Biophysical Research Communications, examined the effect of EG3306 in a mouse model of ischaemic retinal neovascularisation (new blood vessel proliferation). EG3306 was found to significantly inhibit retinal neovascularisation. The authors conclude that EG3306 may have applications in the treatment of human ocular neovascular diseases, such as age-related macular degeneration. An estimated 25 million people worldwide suffer from age-related macular degeneration and approximately 5 million new cases are diagnosed each year in the US.

The work was carried out by an independent group of leading eye disease scientists, led by Dr Robin Ali and Dr James Bainbridge, at The Institute of Opthalmology, London, in collaboration with Ark's vascular group based at University College, London.

EG3306 is a 7mer peptide synthesised by Ark's scientists and optimised to bind specifically to the KDR receptor, which is one of the four main receptors to which the family of Vascular Endothelial Growth Factor (VEGF) proteins bind. Whilst these proteins are essential to maintain blood vessel and ocular integrity, they can, in high levels, cause a significant over-proliferation of blood vessels on the retina leading to blindness. Being KDR receptor specific, Ark's peptide should inhibit damaging angiogenesis without altering the functionality of the other receptors. Ark's team has previously demonstrated that EG3306 has a significant effect in preventing vascularisation in *in vitro* assays of angiogenesis and is sufficiently potent to block the angiogenic effects of VEGF proteins in the same assays.

Commenting on the findings, Professor John Martin, Chief Scientific Officer of Ark, said:

"Our work with EG3306 is based upon the understanding that VEGF is an important factor in the development of neovascular diseases, such as diabetic retinopathy, retinopathy and age-related macular degeneration through the promotion of new blood vessel growth. These findings, in a well established and recognised animal model of angiogenic eye disease, provide compelling evidence that EG3306 peptide is highly effective *in vivo*."

Paul Higham, Commercial Director at Ark, further commented:

"This programme has consistently shown promise and these are exciting results. EG3306 represents a strong candidate for development in a very large market where there is high unmet clinical need. Ark will pursue opportunities with companies interested in licensing or collaborating with Ark to exploit EG3306 in age-related macular degeneration or retinopathy."

- Ends -



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#### **Notes to Editors**

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22nd January 2002

## **Ark Therapeutics Limited**

## Ark HIV-1-Tat derived peptides inhibit HIV replication

London, UK – 22 January 2003: Ark Therapeutics announces the publication in Biochemical and Biophysical Research Communication of the first study demonstrating the anti-HIV activity of a family of novel HIV-1-Tat derived peptides discovered by Ark's scientists in London.

The study, carried out by the National Institute of Health (NIH) in Bethesda (USA), investigated the effects of the peptides given at a single low dose in preventing HIV infection *in vitro*. The results showed that Ark's cysteine rich peptides were active in preventing HIV infection and compared very favourably with other novel anti-HIV compounds in research. Even at the single low dose, the activity was about 60% of the level seen with AZT. In addition, there was no evidence of any cytotoxicity with the active peptides.

HIV TAT protein is produced from HIV-infected cells and is known to work both within the cell, by activating the genes for the HIV virus, and outside the cell, by blocking the entry of other HIV viruses into the host cell. The HIV peptides, identified in this study, are known to inhibit the activity of the HIV TAT proteins and are most likely acting by both intracellular and extracellular mechanisms to produce their anti-HIV effects.

Commenting on the findings, Professor John Martin, Chief Scientific Officer of Ark, said: "The development of new and effective HIV treatments is an increasingly important goal in medicine, particularly as virus strains resistant to current medications continue to emerge. The anti-HIV effect of this novel family of peptides is an interesting finding and with their potential to work within the cell, they offer a significant opportunity to provide a new avenue for HIV treatment."

Paul Higham, Commercial Director of Ark added: "The Company is reviewing its options for developing the compounds and will open discussions on collaboration or licensing with companies interested in the HIV area."

- Ends -

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#### **Notes to Editors**

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By concentrating on specialist areas of unmet clinical need, the Company plans to commercialise products through its own targeted sales infrastructure and where appropriate through co-operative agreements with partners.

#### **HIV** Infection

When HIV infects a cell it produces a small non-structural protein, TAT, which is responsible for activating the genes of the HIV virus within that cell. TAT is also secreted outside of the cell and has two further actions, first it helps other HIV viruses infect other cells and secondly it prevents other HIV viruses infecting a cell that has already been infected with the HIV virus. It does this by binding to a number of cell surface receptors.